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Public Law 97-304  
97th Congress

An Act

To authorize appropriations to carry out the provisions of the Endangered Species Act of 1973 for fiscal years 1983, 1984, and 1985, and for other purposes.

Oct. 13, 1982  
[H.R. 6133]

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Endangered Species Act Amendments of 1982".*

Endangered  
Species Act  
Amendments of  
1982.  
16 USC 1531  
note.

SEC. 2. LISTING PROCESS.

(a) Section 4 of the Endangered Species Act of 1973 (16 U.S.C. 1533) is amended as follows:

(1) Subsection (a) is amended—

(A) by redesignating subparagraphs (1) through (5) of paragraph (1) as subparagraphs (A) through (E), respectively;

(B) by amending that part of paragraph (1) which precedes subparagraph (A) (as so redesignated) by inserting "promulgated in accordance with subsection (b)" immediately after "shall by regulation";

(C) by striking out "sporting," in paragraph (1)(B) (as so redesignated) and inserting in lieu thereof "recreational,";

(D) by striking out the last two sentences in paragraph (1); and

(E) by adding at the end thereof the following new paragraph:

Regulations.

"(3) The Secretary, by regulation promulgated in accordance with subsection (b) and to the maximum extent prudent and determinable—

"(A) shall, concurrently with making a determination under paragraph (1) that a species is an endangered species or a threatened species, designate any habitat of such species which is then considered to be critical habitat; and

"(B) may, from time-to-time thereafter as appropriate, revise such designation."

(2) Subsection (b) is amended to read as follows:

"(b) BASIS FOR DETERMINATIONS.—(1)(A) The Secretary shall make determinations required by subsection (a)(1) solely on the basis of the best scientific and commercial data available to him after conducting a review of the status of the species and after taking into account those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices, within any area under its jurisdiction, or on the high seas.

"(B) In carrying out this section, the Secretary shall give consideration to species which have been—

"(i) designated as requiring protection from unrestricted commerce by any foreign nation, or pursuant to any international agreement; or

“(ii) identified as in danger of extinction, or likely to become so within the foreseeable future, by any State agency or by any agency of a foreign nation that is responsible for the conservation of fish or wildlife or plants.

“(2) The Secretary shall designate critical habitat, and make revisions thereto, under subsection (a)(3) on the basis of the best scientific data available and after taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. The Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned.

Petition,  
findings.

“(3)(A) To the maximum extent practicable, within 90 days after receiving the petition of an interested person under section 553(e) of title 5, United States Code, to add a species to, or to remove a species from, either of the lists published under subsection (c), the Secretary shall make a finding as to whether the petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted. If such a petition is found to present such information, the Secretary shall promptly commence a review of the status of the species concerned. The Secretary shall promptly publish each finding made under this subparagraph in the Federal Register.

Review.

Publications in  
Federal  
Register.

“(B) Within 12 months after receiving a petition that is found under subparagraph (A) to present substantial information indicating that the petitioned action may be warranted, the Secretary shall make one of the following findings:

“(i) The petitioned action is not warranted, in which case the Secretary shall promptly publish such finding in the Federal Register.

“(ii) The petitioned action is warranted, in which case the Secretary shall promptly publish in the Federal Register a general notice and the complete text of a proposed regulation to implement such action in accordance with paragraph (5).

“(iii) The petitioned action is warranted, but that—

“(I) the immediate proposal and timely promulgation of a final regulation implementing the petitioned action in accordance with paragraphs (5) and (6) is precluded by pending proposals to determine whether any species is an endangered species or a threatened species, and

“(II) expeditious progress is being made to add qualified species to either of the lists published under subsection (c) and to remove from such lists species for which the protections of the Act are no longer necessary,

in which case the Secretary shall promptly publish such finding in the Federal Register, together with a description and evaluation of the reasons and data on which the finding is based.

“(C)(i) A petition with respect to which a finding is made under subparagraph (B)(iii) shall be treated as a petition that is resubmitted to the Secretary under subparagraph (A) on the date of such finding and that presents substantial scientific or commercial information that the petitioned action may be warranted.

“(ii) Any negative finding described in subparagraph (A) and any finding described in subparagraph (B)(i) or (iii) shall be subject to judicial review.

Judicial review.

“(D)(i) To the maximum extent practicable, within 90 days after receiving the petition of an interested person under section 553(e) of title 5, United States Code, to revise a critical habitat designation, the Secretary shall make a finding as to whether the petition presents substantial scientific information indicating that the revision may be warranted. The Secretary shall promptly publish such finding in the Federal Register.

Petition, findings.

Publications in Federal Register.

“(ii) Within 12 months after receiving a petition that is found under clause (i) to present substantial information indicating that the requested revision may be warranted, the Secretary shall determine how he intends to proceed with the requested revision, and shall promptly publish notice of such intention in the Federal Register.

“(4) Except as provided in paragraphs (5) and (6) of this subsection, the provisions of section 553 of title 5, United States Code (relating to rulemaking procedures), shall apply to any regulation promulgated to carry out the purposes of this Act.

“(5) With respect to any regulation proposed by the Secretary to implement a determination, designation, or revision referred to in subsection (a)(1) or (3), the Secretary shall—

“(A) not less than 90 days before the effective date of the regulation—

“(i) publish a general notice and the complete text of the proposed regulation in the Federal Register, and

Notice.

“(ii) give actual notice of the proposed regulation (including the complete text of the regulation) to the State agency in each State in which the species is believed to occur, and to each county or equivalent jurisdiction in which the species is believed to occur, and invite the comment of such agency, and each such jurisdiction, thereon;

“(B) insofar as practical, and in cooperation with the Secretary of State, give notice of the proposed regulation to each foreign nation in which the species is believed to occur or whose citizens harvest the species on the high seas, and invite the comment of such nation thereon;

“(C) give notice of the proposed regulation to such professional scientific organizations as he deems appropriate;

“(D) publish a summary of the proposed regulation in a newspaper of general circulation in each area of the United States in which the species is believed to occur; and

“(E) promptly hold one public hearing on the proposed regulation if any person files a request for such a hearing within 45 days after the date of publication of general notice.

Hearings.

“(6)(A) Within the one-year period beginning on the date on which general notice is published in accordance with paragraph (5)(A)(i) regarding a proposed regulation, the Secretary shall publish in the Federal Register—

Publication in Federal Register.

“(i) if a determination as to whether a species is an endangered species or a threatened species, or a revision of critical habitat, is involved, either—

“(I) a final regulation to implement such determination,

“(II) a final regulation to implement such revision or a finding that such revision should not be made,



“(III) notice that such one-year period is being extended under subparagraph (B)(i), or

“(IV) notice that the proposed regulation is being withdrawn under subparagraph (B)(ii), together with the finding on which such withdrawal is based; or

“(ii) subject to subparagraph (C), if a designation of critical habitat is involved, either—

“(I) a final regulation to implement such designation, or

“(II) notice that such one-year period is being extended under such subparagraph.

Additional  
information,  
extension period.

“(B)(i) If the Secretary finds with respect to a proposed regulation referred to in subparagraph (A)(i) that there is substantial disagreement regarding the sufficiency or accuracy of the available data relevant to the determination or revision concerned, the Secretary may extend the one-year period specified in subparagraph (A) for not more than six months for purposes of soliciting additional data.

“(ii) If a proposed regulation referred to in subparagraph (A)(i) is not promulgated as a final regulation within such one-year period (or longer period if extension under clause (i) applies) because the Secretary finds that there is not sufficient evidence to justify the action proposed by the regulation, the Secretary shall immediately withdraw the regulation. The finding on which a withdrawal is based shall be subject to judicial review. The Secretary may not propose a regulation that has previously been withdrawn under this clause unless he determines that sufficient new information is available to warrant such proposal.

Judicial  
review.

Publication in  
Federal  
Register.

“(iii) If the one-year period specified in subparagraph (A) is extended under clause (i) with respect to a proposed regulation, then before the close of such extended period the Secretary shall publish in the Federal Register either a final regulation to implement the determination or revision concerned, a finding that the revision should not be made, or a notice of withdrawal of the regulation under clause (ii), together with the finding on which the withdrawal is based.

“(C) A final regulation designating critical habitat of an endangered species or a threatened species shall be published concurrently with the final regulation implementing the determination that such species is endangered or threatened, unless the Secretary deems that—

“(i) it is essential to the conservation of such species that the regulation implementing such determination be promptly published; or

“(ii) critical habitat of such species is not then determinable, in which case the Secretary, with respect to the proposed regulation to designate such habitat, may extend the one-year period specified in subparagraph (A) by not more than one additional year, but not later than the close of such additional year the Secretary must publish a final regulation, based on such data as may be available at that time, designating, to the maximum extent prudent, such habitat.

“(7) Neither paragraph (4), (5), or (6) of this subsection nor section 553 of title 5, United States Code, shall apply to any regulation issued by the Secretary in regard to any emergency posing a significant risk to the well-being of any species of fish or wildlife or plants, but only if—

“(A) at the time of publication of the regulation in the Federal Register the Secretary publishes therein detailed reasons why such regulation is necessary; and

Publication in  
Federal  
Register.

“(B) in the case such regulation applies to resident species of fish or wildlife, or plants, the Secretary gives actual notice of such regulation to the State agency in each State in which such species is believed to occur.

Such regulation shall, at the discretion of the Secretary, take effect immediately upon the publication of the regulation in the Federal Register. Any regulation promulgated under the authority of this paragraph shall cease to have force and effect at the close of the 240-day period following the date of publication unless, during such 240-day period, the rulemaking procedures which would apply to such regulation without regard to this paragraph are complied with. If at any time after issuing an emergency regulation the Secretary determines, on the basis of the best appropriate data available to him, that substantial evidence does not exist to warrant such regulation, he shall withdraw it.

Regulations,  
effective date.

“(8) The publication in the Federal Register of any proposed or final regulation which is necessary or appropriate to carry out the purposes of this Act shall include a summary by the Secretary of the data on which such regulation is based and shall show the relationship of such data to such regulation; and if such regulation designates or revises critical habitat, such summary shall, to the maximum extent practicable, also include a brief description and evaluation of those activities (whether public or private) which, in the opinion of the Secretary, if undertaken may adversely modify such habitat, or may be affected by such designation.”

Data summary.

(3) Subsection (c) is amended—

(A) by amending paragraph (1) by striking out “, and from time to time he may by regulation revise,” in the first sentence thereof, and by adding at the end thereof the following new sentence: “The Secretary shall from time to time revise each list published under the authority of this subsection to reflect recent determinations, designations, and revisions made in accordance with subsections (a) and (b).”;

(B) by striking out paragraphs (2) and (3) thereof; and

(C) by redesignating paragraph (4) thereof as paragraph (2).

(4) Such section 4 is further amended—

16 USC 1533.

(A) by amending subsection (d) by striking out “section 6(a)” and inserting in lieu thereof “section 6(c)”;

(B) by striking out subsection (f) thereof;

(C) by redesignating subsections (g) and (h) as subsections (f) and (g), respectively;

(D) by amending the second sentence of subsection (f) (as redesignated by subparagraph (C)) by striking out “recovery plans,” and inserting in lieu thereof “recovery plans (1) shall, to the maximum extent practicable, give priority to those endangered species or threatened species most likely to benefit from such plans, particularly those species that are, or may be, in conflict with construction or other developmental projects or other forms of economic activity, and (2)”;

(E) by amending subsection (g) (as redesignated by subparagraph (C))—

Comments.  
Written  
statement to  
agency.

16 USC 1533  
note.  
*Ante*, p. 1411.

Restrictions.

(i) by striking out "subsection (c)(2)" in paragraph (1) and inserting in lieu thereof "subsection (b)(3)";

(ii) by striking out "for listing" in paragraph (3) and inserting in lieu thereof "under subsection (a)(1) of this section"; and

(iii) by striking out "subsection (g)" in paragraph (4) and inserting in lieu thereof "subsection (f)"; and

(F) by inserting at the end thereof the following new subsection:

"(h) If, in the case of any regulation proposed by the Secretary under the authority of this section, a State agency to which notice thereof was given in accordance with subsection (b)(5)(A)(ii) files comments disagreeing with all or part of the proposed regulation, and the Secretary issues a final regulation which is in conflict with such comments, or if the Secretary fails to adopt a regulation pursuant to an action petitioned by a State agency under subsection (b)(3), the Secretary shall submit to the State agency a written justification for his failure to adopt regulations consistent with the agency's comments or petition."

(b)(1) Any petition filed under section 4(c)(2) of the Endangered Species Act of 1973 (as in effect on the day before the date of the enactment of this Act) and any regulation proposed under section 4(f) of such Act of 1973 (as in effect on such day) that is pending on such date of enactment shall be treated as having been filed or proposed on such date of enactment under section 4(b) of such Act of 1973 (as amended by subsection (a)); and the procedural requirements specified in such section 4(b) (as so amended) regarding such petition or proposed regulation shall be deemed to be complied with to the extent that like requirements under such section 4 (as in effect before the date of the enactment of this Act) were complied with before such date of enactment.

(2) Any regulation proposed after, or pending on, the date of the enactment of this Act to designate critical habitat for a species that was determined before such date of enactment to be endangered or threatened shall be subject to the procedures set forth in section 4 of such Act of 1973 (as amended by subsection (a)) for regulations proposing revisions to critical habitat instead of those for regulations proposing the designation of critical habitat.

(3) Any list of endangered species or threatened species (as in effect under section 4(c) of such Act of 1973 on the day before the date of the enactment of this Act) shall remain in effect unless and until determinations regarding species and designations and revisions of critical habitats that require changes to such list are made in accordance with subsection (b)(5) of such Act of 1973 (as added by subsection (a)).

(4) Section 4(a)(3)(A) of such Act of 1973 (as added by subsection (a)) shall not apply with respect to any species which was listed as an endangered species or a threatened species before November 10, 1978.

### SEC. 3. COOPERATION WITH THE STATES.

Section 6 of the Endangered Species Act of 1973 (16 U.S.C. 1535) is amended—

(1) by striking out "66% per centum" in subsection (d)(2)(i) thereof and inserting in lieu thereof "75 percent"; and

(2) by striking out "75 per centum" in subsection (d)(2)(ii) thereof and inserting in lieu thereof "90 percent".

## SEC. 4. INTERAGENCY COOPERATION AND COMMITTEE EXEMPTIONS.

(a) Section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1536) is amended as follows:

- (1) Subsection (a) is amended by redesignating paragraph (3) as paragraph (4), and by inserting immediately after paragraph (2) the following new paragraph:

“(3) Subject to such guidelines as the Secretary may establish, a Federal agency shall consult with the Secretary on any prospective agency action at the request of, and in cooperation with, the prospective permit or license applicant if the applicant has reason to believe that an endangered species or a threatened species may be present in the area affected by his project and that implementation of such action will likely affect such species.”.

- (2) Subsection (b) is amended to read as follows:

“(b) OPINION OF SECRETARY.—(1)(A) Consultation under subsection (a)(2) with respect to any agency action shall be concluded within the 90-day period beginning on the date on which initiated or, subject to subparagraph (B), within such other period of time as is mutually agreeable to the Secretary and the Federal agency.

“(B) In the case of an agency action involving a permit or license applicant, the Secretary and the Federal agency may not mutually agree to conclude consultation within a period exceeding 90 days unless the Secretary, before the close of the 90th day referred to in subparagraph (A)—

Consultation  
period.

“(i) if the consultation period proposed to be agreed to will end before the 150th day after the date on which consultation was initiated, submits to the applicant a written statement setting forth—

“(I) the reasons why a longer period is required,

“(II) the information that is required to complete the consultation, and

“(III) the estimated date on which consultation will be completed; or

“(ii) if the consultation period proposed to be agreed to will end 150 or more days after the date on which consultation was initiated, obtains the consent of the applicant to such period. The Secretary and the Federal agency may mutually agree to extend a consultation period established under the preceding sentence if the Secretary, before the close of such period, obtains the consent of the applicant to the extension.

“(2) Consultation under subsection (a)(3) shall be concluded within such period as is agreeable to the Secretary, the Federal agency, and the applicant concerned.

“(3)(A) Promptly after conclusion of consultation under paragraph (2) or (3) of subsection (a), the Secretary shall provide to the Federal agency and the applicant, if any, a written statement setting forth the Secretary's opinion, and a summary of the information on which the opinion is based, detailing how the agency action affects the species or its critical habitat. If jeopardy or adverse modification is found, the Secretary shall suggest those reasonable and prudent alternatives which he believes would not violate subsection (a)(2) and can be taken by the Federal agency or applicant in implementing the agency action.

“(B) Consultation under subsection (a)(3), and an opinion issued by the Secretary incident to such consultation, regarding an agency action shall be treated respectively as a consultation under subsec-

Review and  
notification.



tion (a)(2), and as an opinion issued after consultation under such subsection, regarding that action if the Secretary reviews the action before it is commenced by the Federal agency and finds, and notifies such agency, that no significant changes have been made with respect to the action and that no significant change has occurred regarding the information used during the initial consultation.

"(4) If after consultation under subsection (a)(2), the Secretary concludes that—

"(A) the agency action will not violate such subsection, or offers reasonable and prudent alternatives which the Secretary believes would not violate such subsection; and

"(B) the taking of an endangered species or a threatened species incidental to the agency action will not violate such subsection;

the Secretary shall provide the Federal agency and the applicant concerned, if any, with a written statement that—

"(i) specifies the impact of such incidental taking on the species,

"(ii) specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact, and

"(iii) sets forth the terms and conditions (including, but not limited to, reporting requirements) that must be complied with by the Federal agency or applicant (if any), or both, to implement the measures specified under clause (ii)."

(3) Subsection (c) is amended by amending the penultimate sentence in paragraph (1) by inserting " , except that if a permit or license applicant is involved, the 180-day period may not be extended unless such agency provides the applicant, before the close of such period, with a written statement setting forth the estimated length of the proposed extension and the reasons therefor" immediately after "agency" and before the parenthesis.

(4) Subsection (e)(10) is amended by striking out the first sentence thereof.

(5) Subsection (g) is amended as follows:

(A) The sideheading is amended to read as follows:  
"APPLICATION FOR EXEMPTION AND REPORT TO THE COMMITTEE.—"

(B) The second sentence of paragraph (1) is amended to read as follows: "An application for an exemption shall be considered initially by the Secretary in the manner provided for in this subsection, and shall be considered by the Committee for a final determination under subsection (h) after a report is made pursuant to paragraph (5)."

(C) Paragraph (2) is amended—

(i) by striking out the first sentence of subparagraph (A) and inserting in lieu thereof the following: "An exemption applicant shall submit a written application to the Secretary, in a form prescribed under subsection (f), not later than 90 days after the completion of the consultation process; except that, in the case of any agency action involving a permit or license applicant, such application shall be submitted not later than 90 days after the date on which the Federal agency concerned takes final agency action with respect to the issuance of the permit or license. For purposes of the

Written  
statement to  
agency.

Submittal to  
Secretary.

"Final agency  
action."

preceding sentence, the term 'final agency action' means (i) a disposition by an agency with respect to the issuance of a permit or license that is subject to administrative review, whether or not such disposition is subject to judicial review; or (ii) if administrative review is sought with respect to such disposition, the decision resulting after such review."; and

(ii) by amending subparagraph (B)—

(I) by inserting "(i)" immediately after "promptly",

(II) by striking out "to the review board to be established under paragraph (3) and", and

(III) by inserting "; and (ii) publish notice of receipt of the application in the Federal Register, including a summary of the information contained in the application and a description of the agency action with respect to which the application for exemption has been filed" immediately before the period.

(D) Paragraphs (3), (4), (9), and (11) are repealed.

(E) Paragraph (5) is redesignated as paragraph (3) and is further amended to read as follows:

"(3) The Secretary shall within 20 days after the receipt of an application for exemption, or within such other period of time as is mutually agreeable to the exemption applicant and the Secretary—

"(A) determine that the Federal agency concerned and the exemption applicant have—

"(i) carried out the consultation responsibilities described in subsection (a) in good faith and made a reasonable and responsible effort to develop and fairly consider modifications or reasonable and prudent alternatives to the proposed agency action which would not violate subsection (a)(2);

"(ii) conducted any biological assessment required by subsection (c); and

"(iii) to the extent determinable within the time provided herein, refrained from making any irreversible or irretrievable commitment of resources prohibited by subsection (d); or

"(B) deny the application for exemption because the Federal agency concerned or the exemption applicant have not met the requirements set forth in subparagraph (A)(i), (ii), and (iii). The denial of an application under subparagraph (B) shall be considered final agency action for purposes of chapter 7 of title 5, United States Code."

(F) Paragraph (6) is redesignated as paragraph (4) and is further amended to read as follows:

"(4) If the Secretary determines that the Federal agency concerned and the exemption applicant have met the requirements set forth in paragraph (3)(A)(i), (ii), and (iii) he shall, in consultation with the Members of the Committee, hold a hearing on the application for exemption in accordance with sections 554, 555, and 556 (other than subsection (b)(1) and (2) thereof) of title 5, United States Code, and prepare the report to be submitted pursuant to paragraph (5)."

(G) Paragraph (7) is redesignated as paragraph (5) and is further amended—

Publication in  
Federal  
Register.

Application,  
determination.

5 USC 701 *et seq.*  
Hearings.

Report to  
Committee.

(i) by striking out that part which precedes subparagraph (A) and inserting in lieu thereof "Within 140 days after making the determinations under paragraph (3) or within such other period of time as is mutually agreeable to the exemption applicant and the Secretary, the Secretary shall submit to the Committee a report discussing—";

(ii) by striking out the period immediately after "by the Committee" in subparagraph (C) and inserting in lieu thereof "; and"; and

(iii) by adding at the end thereof the following:

"(D) whether the Federal agency concerned and the exemption applicant refrained from making any irreversible or irretrievable commitment of resources prohibited by subsection (d)."

(H) Paragraph (8) is redesignated as paragraph (6).

(I) Paragraph (10) is redesignated as paragraph (7) and is amended to read as follows:

"(7) Upon request of the Secretary, the head of any Federal agency is authorized to detail, on a nonreimbursable basis, any of the personnel of such agency to the Secretary to assist him in carrying out his duties under this section."

(J) Paragraph (12) is redesignated as paragraph (8) and is further amended by striking out "of review boards" and inserting in lieu thereof "resulting from activities pursuant to this subsection".

(6) Subsection (h)(1) is amended—

(A) by striking out "90 days of receiving the report of the review board under subsection (g)(7)" in the matter preceding subparagraph (A) and inserting in lieu thereof "30 days after receiving the report of the Secretary pursuant to subsection (g)(5)";

(B) by striking out "review board" in subparagraph (A) and inserting in lieu thereof "Secretary, the record of the hearing held under subsection (g)(4)";

(C) by striking out "and" at the end of subparagraph (A)(ii);

(D) by inserting immediately after subparagraph (A)(iii) the following:

"(iv) neither the Federal agency concerned nor the exemption applicant made any irreversible or irretrievable commitment of resources prohibited by subsection (d); and".

(7) Subsection (o) is amended to read as follows:

"(o) Notwithstanding sections 4(d) and 9(a)(1)(B) and (C) or any regulation promulgated to implement either such section—

"(1) any action for which an exemption is granted under subsection (h) shall not be considered to be a taking of any endangered species or threatened species with respect to any activity which is necessary to carry out such action; and

"(2) any taking that is in compliance with the terms and conditions specified in a written statement provided under subsection (b)(4)(iii) shall not be considered to be a taking of the species concerned."

(b) Paragraph (11) of section 3 of the Endangered Species Act of 1973 (16 U.S.C. 1532(11)) is repealed.

## SEC. 5. CONVENTION IMPLEMENTATION.

Section 8A of the Endangered Species Act of 1973 (16 U.S.C. 1537a) is amended—

(1) by amending subsection (c) by inserting “(1)” immediately after “SCIENTIFIC AUTHORITY FUNCTIONS.—”, and by adding at the end thereof the following new paragraph:

“(2) The Secretary shall base the determinations and advice given by him under Article IV of the Convention with respect to wildlife upon the best available biological information derived from professionally accepted wildlife management practices; but is not required to make, or require any State to make, estimates of population size in making such determinations or giving such advice.”;

(2) by amending subsection (d) to read as follows:

“(d) RESERVATIONS BY THE UNITED STATES UNDER CONVENTION.—If the United States votes against including any species in Appendix I or II of the Convention and does not enter a reservation pursuant to paragraph (3) of Article XV of the Convention with respect to that species, the Secretary of State, before the 90th day after the last day on which such a reservation could be entered, shall submit to the Committee on Merchant Marine and Fisheries of the House of Representatives, and to the Committee on the Environment and Public Works of the Senate, a written report setting forth the reasons why such a reservation was not entered.”; and

(3) by amending subsection (e) to read as follows:

“(e) WILDLIFE PRESERVATION IN WESTERN HEMISPHERE.—(1) The Secretary of the Interior (hereinafter in this subsection referred to as the ‘Secretary’), in cooperation with the Secretary of State, shall act on behalf of, and represent, the United States in all regards as required by the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (56 Stat. 1354, T.S. 982, hereinafter in this subsection referred to as the ‘Western Convention’). In the discharge of these responsibilities, the Secretary and the Secretary of State shall consult with the Secretary of Agriculture, the Secretary of Commerce, and the heads of other agencies with respect to matters relating to or affecting their areas of responsibility.

“(2) The Secretary and the Secretary of State shall, in cooperation with the contracting parties to the Western Convention and, to the extent feasible and appropriate, with the participation of State agencies, take such steps as are necessary to implement the Western Convention. Such steps shall include, but not be limited to—

“(A) cooperation with contracting parties and international organizations for the purpose of developing personnel resources and programs that will facilitate implementation of the Western Convention;

“(B) identification of those species of birds that migrate between the United States and other contracting parties, and the habitats upon which those species depend, and the implementation of cooperative measures to ensure that such species will not become endangered or threatened; and

“(C) identification of measures that are necessary and appropriate to implement those provisions of the Western Convention which address the protection of wild plants.

“(3) No later than September 30, 1985, the Secretary and the Secretary of State shall submit a report to Congress describing those steps taken in accordance with the requirements of this subsection

Report to congressional committees.

T.S. 981.

Report to Congress.



and identifying the principal remaining actions yet necessary for comprehensive and effective implementation of the Western Convention.

"(4) The provisions of this subsection shall not be construed as affecting the authority, jurisdiction, or responsibility of the several States to manage, control, or regulate resident fish or wildlife under State law or regulations."

(b) The amendment made by paragraph (1) of subsection (a) shall take effect January 1, 1981.

Effective date.  
16 USC 1537a  
note.

#### SEC. 6. EXPERIMENTAL POPULATIONS AND OTHER EXCEPTIONS.

Section 10 of the Endangered Species Act of 1973 (16 U.S.C. 1539) is amended as follows:

(1) Subsection (a) is amended to read as follows:

"(a) PERMITS.—(1) The Secretary may permit, under such terms and conditions as he shall prescribe—

16 USC 1538.

"(A) any act otherwise prohibited by section 9 for scientific purposes or to enhance the propagation or survival of the affected species, including, but not limited to, acts necessary for the establishment and maintenance of experimental populations pursuant to subsection (j); or

Post, p. 1424.

"(B) any taking otherwise prohibited by section 9(a)(1)(B) if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Permit issuance.  
Conservation  
plan.

"(2)(A) No permit may be issued by the Secretary authorizing any taking referred to in paragraph (1)(B) unless the applicant therefor submits to the Secretary a conservation plan that specifies—

"(i) the impact which will likely result from such taking;

"(ii) what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps;

"(iii) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and

"(iv) such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan.

"(B) If the Secretary finds, after opportunity for public comment, with respect to a permit application and the related conservation plan that—

"(i) the taking will be incidental;

"(ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking;

"(iii) the applicant will ensure that adequate funding for the plan will be provided;

"(iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and

"(v) the measures, if any, required under subparagraph (A)(iv) will be met;

and he has received such other assurances as he may require that the plan will be implemented, the Secretary shall issue the permit. The permit shall contain such terms and conditions as the Secretary deems necessary or appropriate to carry out the purposes of this paragraph, including, but not limited to, such reporting requirements as the Secretary deems necessary for determining whether such terms and conditions are being complied with.

“(C) The Secretary shall revoke a permit issued under this paragraph if he finds that the permittee is not complying with the terms and conditions of the permit.”

Permit  
revocation.

(2) Subsection (d) is amended by striking out “subsections (a)” and inserting in lieu thereof “subsections (a)(1)(A)”.

(3) Subsection (f) is amended—

(A) by amending paragraph (1)(B) by inserting “substantial” immediately before “etching” and before “carving”, and by adding at the end thereof the following new sentence: “For purposes of this subsection, polishing or the adding of minor superficial markings does not constitute substantial etching, engraving, or carving.”; and

(B) by adding at the end thereof the following new paragraph:

“(9)(A) The Secretary shall carry out a comprehensive review of the effectiveness of the regulations prescribed pursuant to paragraph (5) of this subsection—

Review.

“(i) in insuring that pre-Act finished scrimshaw products, or the raw materials for such products, have been adequately accounted for and not disposed of contrary to the provisions of this Act; and

“(ii) in preventing the commingling of unlawfully imported or acquired marine mammal products with such exempted products either by persons to whom certificates of exemption have been issued under paragraph (4) of this subsection or by subsequent purchasers from such persons.

“(B) In conducting the review required under subparagraph (A), the Secretary shall consider, but not be limited to—

“(i) the adequacy of the reporting and records required of exemption holders;

“(ii) the extent to which such reports and records are subject to verification;

“(iii) methods for identifying individual pieces of scrimshaw products and raw materials and for preventing commingling of exempted materials from those not subject to such exemption; and

“(iv) the retention of unworked materials in controlled-access storage.

The Secretary shall submit a report of such review to the Committee on Merchant Marine and Fisheries of the House of Representatives and the Committee on the Environment and Public Works of the Senate and make it available to the general public. Based on such review, the Secretary shall, on or before October 1, 1983, propose and adopt such revisions to such regulations as he deems necessary and appropriate to carry out this paragraph. Upon publication of such revised regulations, the Secretary may renew for a further period of not to exceed three years any certificate of exemption previously renewed under paragraph (8) of this subsection, subject to such new terms and conditions as are necessary and appropriate under the revised regulations; except that any certificate of exemption that would, but for this clause, expire on or after the date of enactment of this paragraph and before the date of the adoption of such regulations may be extended until such time after the date of adoption as may be necessary for purposes of applying such regulations to the certificate. Notwithstanding the foregoing, however, no person may, after January 31, 1984, sell or offer for sale in interstate or foreign commerce any pre-Act finished scrimshaw product unless

Report to  
congressional  
committees.  
Public  
availability.

Certificate of  
exemption,  
renewal.

such person has been issued a valid certificate of exemption by the Secretary under this subsection and unless such product or the raw material for such product was held by such person on the date of the enactment of this paragraph.”

(4)(A) Subsection (h)(1) is amended—

(i) by striking out “(other than scrimshaw)”; and

(ii) by amending subparagraph (A) to read as follows:

“(A) is not less than 100 years of age;”.

(B) The amendment made by subparagraph (A) shall take effect January 1, 1981.

(5) Subsection (i) is amended to read as follows:

“(i) **NONCOMMERCIAL TRANSSHIPMENTS.**—Any importation into the United States of fish or wildlife shall, if—

“(1) such fish or wildlife was lawfully taken and exported from the country of origin and country of reexport, if any;

“(2) such fish or wildlife is in transit or transshipment through any place subject to the jurisdiction of the United States en route to a country where such fish or wildlife may be lawfully imported and received;

“(3) the exporter or owner of such fish or wildlife gave explicit instructions not to ship such fish or wildlife through any place subject to the jurisdiction of the United States, or did all that could have reasonably been done to prevent transshipment, and the circumstances leading to the transshipment were beyond the exporter’s or owner’s control;

“(4) the applicable requirements of the Convention have been satisfied; and

“(5) such importation is not made in the course of a commercial activity,

be an importation not in violation of any provision of this Act or any regulation issued pursuant to this Act while such fish or wildlife remains in the control of the United States Customs Service.”.

(6) At the end thereof insert the following new subsection:

“(j) **EXPERIMENTAL POPULATIONS.**—(1) For purposes of this subsection, the term ‘experimental population’ means any population (including any offspring arising solely therefrom) authorized by the Secretary for release under paragraph (2), but only when, and at such times as, the population is wholly separate geographically from nonexperimental populations of the same species.

“(2)(A) The Secretary may authorize the release (and the related transportation) of any population (including eggs, propagules, or individuals) of an endangered species or a threatened species outside the current range of such species if the Secretary determines that such release will further the conservation of such species.

“(B) Before authorizing the release of any population under subparagraph (A), the Secretary shall by regulation identify the population and determine, on the basis of the best available information, whether or not such population is essential to the continued existence of an endangered species or a threatened species.

“(C) For the purposes of this Act, each member of an experimental population shall be treated as a threatened species; except that—

“(i) solely for purposes of section 7 (other than subsection (a)(1) thereof), an experimental population determined under subparagraph (B) to be not essential to the continued existence of a species shall be treated, except when it occurs in an area within the National Wildlife Refuge System or the National

Effective date.  
16 USC 1539  
note.

Release of  
endangered  
species.

16 USC 1536.

Park System, as a species proposed to be listed under section 4; *Ante*, p. 1411.  
and

“(ii) critical habitat shall not be designated under this Act for any experimental population determined under subparagraph (B) to be not essential to the continued existence of a species.

“(3) The Secretary, with respect to populations of endangered species or threatened species that the Secretary authorized, before the date of the enactment of this subsection, for release in geographical areas separate from the other populations of such species, shall determine by regulation which of such populations are an experimental population for the purposes of this subsection and whether or not each is essential to the continued existence of an endangered species or a threatened species.”.

#### SEC. 7. ENFORCEMENT.

Section 11 of the Endangered Species Act of 1973 (16 U.S.C. 1540) is amended as follows:

(1) Subsection (e) is amended by adding at the end thereof the following new paragraph:

“(6) The Attorney General of the United States may seek to enjoin any person who is alleged to be in violation of any provision of this Act or regulation issued under authority thereof.”.

(2) Subsection (g) is amended—

(A) by amending paragraph (1)—

(i) by striking out “any State.” in subparagraph (B) and inserting in lieu thereof “any State; or”,

(ii) by inserting immediately after subparagraph (B) the following new subparagraph:

“(C) against the Secretary where there is alleged a failure of the Secretary to perform any act or duty under section 4 which is not discretionary with the Secretary.”, and *Ante*, p. 1411.

(iii) by amending the first sentence following subparagraph (C) (as added by clause (ii) of this subparagraph), by inserting “or to order the Secretary to perform such act or duty,” immediately after “any such provision or regulation,”; and

(B) by amending paragraph (2) by adding the following new subparagraph immediately after subparagraph (B) thereof:

“(C) No action may be commenced under subparagraph (1)(C) of this section prior to sixty days after written notice has been given to the Secretary; except that such action may be brought immediately after such notification in the case of an action under this section respecting an emergency posing a significant risk to the well-being of any species of fish or wildlife or plants.”. *Written notification.*

#### SEC. 8. AUTHORIZATION OF APPROPRIATIONS.

Section 15 of the Endangered Species Act of 1973 (16 U.S.C. 1542) is amended to read as follows:

##### “AUTHORIZATION OF APPROPRIATIONS

“SEC. 15. (a) IN GENERAL.—Except as provided in subsections (b), (c), and (d), there are authorized to be appropriated—

“(1) not to exceed \$27,000,000 for each of fiscal years 1983, 1984, and 1985 to enable the Department of the Interior to carry



out such functions and responsibilities as it may have been given under this Act;

"(2) not to exceed \$3,500,000 for each of fiscal years 1983, 1984, and 1985 to enable the Department of Commerce to carry out such functions and responsibilities as it may have been given under this Act; and

"(3) not to exceed \$1,850,000 for each of fiscal years 1983, 1984, and 1985 to enable the Department of Agriculture to carry out its functions and responsibilities with respect to the enforcement of this Act and the Convention which pertain to the importation or exportation of plants.

16 USC 1535. "(b) COOPERATION WITH STATES.—For the purposes of section 6, there are authorized to be appropriated not to exceed \$6,000,000 for each of fiscal years 1983, 1984, and 1985.

*Ante*, p. 1417. "(c) EXEMPTIONS FROM ACT.—There are authorized to be appropriated to the Secretary to assist him and the Endangered Species Committee in carrying out their functions under section 7(e), (g), and (h) not to exceed \$600,000 for each of fiscal years 1983, 1984, and 1985.

*Ante*, p. 1421. "(d) CONVENTION IMPLEMENTATION.—There are authorized to be appropriated to the Department of the Interior for purposes of carrying out section 8A(e) not to exceed \$150,000 for each of fiscal years 1983 and 1984, and not to exceed \$300,000 for fiscal year 1985, and such sums shall remain available until expended."

16 USC 1535, 1536. (b) Sections 6(i) and 7(q) of such Act of 1973 are repealed.

#### SEC. 9. MISCELLANEOUS AMENDMENTS.

16 USC 1531. (a) Section 2(c) of the Endangered Species Act of 1973 (16 U.S.C. 1532(c)) is amended—

(1) by inserting "(1)" immediately before "It is"; and

(2) by adding the following new paragraph:

"(2) It is further declared to be the policy of Congress that Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species."

(b) Section 9 of the Endangered Species Act of 1973 (16 U.S.C. 1538) is amended—

(1) by amending subsection (a)(2) by redesignating subparagraphs (B), (C), and (D) as subparagraphs (C), (D), and (E), respectively, and by inserting the following new subparagraph immediately after subparagraph (A) thereof:

"(B) remove and reduce to possession any such species from areas under Federal jurisdiction;"

(2) by amending subsection (b)(1) to read as follows:

"(b)(1) SPECIES HELD IN CAPTIVITY OR CONTROLLED ENVIRONMENT.—The provisions of subsections (a)(1)(A) and (a)(1)(G) of this section shall not apply to any fish or wildlife which was held in captivity or in a controlled environment on (A) December 28, 1973, or (B) the date of the publication in the Federal Register of a final regulation adding such fish or wildlife species to any list published pursuant to subsection (c) of section 4 of this Act: *Provided*, That such holding and any subsequent holding or use of the fish or wildlife was not in the course of a commercial activity. With respect to any act prohibited by subsections (a)(1)(A) and (a)(1)(G) of this section which occurs after a period of 180 days from (i) December 28, 1973, or (ii) the date of publication in the Federal Register of a final regulation adding such fish or wildlife species to any list published

*Ante*, p. 1411.

pursuant to subsection (c) of section 4 of this Act, there shall be a rebuttable presumption that the fish or wildlife involved in such act is not entitled to the exemption contained in this subsection.”; and

*Ante*, p. 1411.

(3) by amending subsection (b)(2)(A) by striking out “This section shall not apply to” and inserting in lieu thereof “The provisions of subsection (a)(1) shall not apply to”.

(c) Section 11(a)(1) and (b)(1) of such Act of 1973 are each amended by striking out “or (C)” immediately after “(a)(2)(A), (B),” and inserting in lieu thereof “(C), or (D)”.

16 USC 1540.

Approved October 13, 1982.

#### LEGISLATIVE HISTORY—H.R. 6133 (S. 2309):

HOUSE REPORTS: No. 97-567 Pt. I (Comm. on Merchant Marine and Fisheries) and No. 97-835 (Comm. of Conference).

SENATE REPORT No. 97-418 accompanying S. 2309 (Comm. on Environment and Public Works).

CONGRESSIONAL RECORD, Vol. 128 (1982):

June 8, considered and passed House.

June 9, considered and passed Senate, amended, in lieu of S. 2309.

Sept. 20, Senate agreed to conference report.

Sept. 30, House agreed to conference report.

(l) This section does not constitute authority to withhold any information from Congress, and does not authorize the closing of any agency meeting or portion thereof required by any other provision of law to be open.

(m) Nothing in this section authorizes any agency to withhold from any individual any record, including transcripts, recordings, or minutes required by this section, which is otherwise accessible to such individual under section 552a of this title.

(Added Pub. L. 94-409, §3(a), Sept. 13, 1976, 90 Stat. 1241; amended Pub. L. 104-66, title III, §3002, Dec. 21, 1995, 109 Stat. 734.)

#### REFERENCES IN TEXT

Section 552(e) of this title, referred to in subsec. (a)(1), was redesignated section 552(f) of this title by section 1802(b) of Pub. L. 99-570.

180 days after the date of enactment of this section, referred to in subsec. (g), means 180 days after the date of enactment of Pub. L. 94-409, which was approved Sept. 13, 1976.

#### AMENDMENTS

1995—Subsec. (j). Pub. L. 104-66 amended subsec. (j) generally. Prior to amendment, subsec. (j) read as follows: “Each agency subject to the requirements of this section shall annually report to Congress regarding its compliance with such requirements, including a tabulation of the total number of agency meetings open to the public, the total number of meetings closed to the public, the reasons for closing such meetings, and a description of any litigation brought against the agency under this section, including any costs assessed against the agency in such litigation (whether or not paid by the agency).”

#### EFFECTIVE DATE

Section 6 of Pub. L. 94-409 provided that:

“(a) Except as provided in subsection (b) of this section, the provisions of this Act [see Short Title note set out below] shall take effect 180 days after the date of its enactment [Sept. 13, 1976].

“(b) Subsection (g) of section 552b of title 5, United States Code, as added by section 3(a) of this Act, shall take effect upon enactment [Sept. 13, 1976].”

#### SHORT TITLE OF 1976 AMENDMENT

Section 1 of Pub. L. 94-409 provided: “That this Act [enacting this section, amending sections 551, 552, 556, and 557 of this title, section 10 of Pub. L. 92-463, set out in the Appendix to this title, and section 410 of Title 39, and enacting provisions set out as notes under this section] may be cited as the ‘Government in the Sunshine Act’.”

#### TERMINATION OF REPORTING REQUIREMENTS

For termination, effective May 15, 2000, of provisions of law requiring submittal to Congress of any annual, semiannual, or other regular periodic report listed in House Document No. 103-7 (in which the report required by subsec. (j) of this section is listed on page 151), see section 3003 of Pub. L. 104-66, as amended, set out as a note under section 1113 of Title 31, Money and Finance.

#### TERMINATION OF ADMINISTRATIVE CONFERENCE OF UNITED STATES

For termination of Administrative Conference of United States, see provision of title IV of Pub. L. 104-52, set out as a note preceding section 591 of this title.

#### DECLARATION OF POLICY AND STATEMENT OF PURPOSE

Section 2 of Pub. L. 94-409 provided that: “It is hereby declared to be the policy of the United States that the

public is entitled to the fullest practicable information regarding the decisionmaking processes of the Federal Government. It is the purpose of this Act [see Short Title note set out above] to provide the public with such information while protecting the rights of individuals and the ability of the Government to carry out its responsibilities.”

### § 553. Rule making

(a) This section applies, according to the provisions thereof, except to the extent that there is involved—

(1) a military or foreign affairs function of the United States; or

(2) a matter relating to agency management or personnel or to public property, loans, grants, benefits, or contracts.

(b) General notice of proposed rule making shall be published in the Federal Register, unless persons subject thereto are named and either personally served or otherwise have actual notice thereof in accordance with law. The notice shall include—

(1) a statement of the time, place, and nature of public rule making proceedings;

(2) reference to the legal authority under which the rule is proposed; and

(3) either the terms or substance of the proposed rule or a description of the subjects and issues involved.

Except when notice or hearing is required by statute, this subsection does not apply—

(A) to interpretative rules, general statements of policy, or rules of agency organization, procedure, or practice; or

(B) when the agency for good cause finds (and incorporates the finding and a brief statement of reasons therefor in the rules issued) that notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest.

(c) After notice required by this section, the agency shall give interested persons an opportunity to participate in the rule making through submission of written data, views, or arguments with or without opportunity for oral presentation. After consideration of the relevant matter presented, the agency shall incorporate in the rules adopted a concise general statement of their basis and purpose. When rules are required by statute to be made on the record after opportunity for an agency hearing, sections 556 and 557 of this title apply instead of this subsection.

(d) The required publication or service of a substantive rule shall be made not less than 30 days before its effective date, except—

(1) a substantive rule which grants or recognizes an exemption or relieves a restriction;

(2) interpretative rules and statements of policy; or

(3) as otherwise provided by the agency for good cause found and published with the rule.

(e) Each agency shall give an interested person the right to petition for the issuance, amendment, or repeal of a rule.

(Pub. L. 89-554, Sept. 6, 1966, 80 Stat. 383.)

## HISTORICAL AND REVISION NOTES

<i>Derivation</i>	<i>U.S. Code</i>	<i>Revised Statutes and Statutes at Large</i>
.....	5 U.S.C. 1003.	June 11, 1946, ch. 324, § 4, 60 Stat. 238.

In subsection (a)(1), the words “or naval” are omitted as included in “military”.

In subsection (b), the word “when” is substituted for “in any situation in which”.

In subsection (c), the words “for oral presentation” are substituted for “to present the same orally in any manner”. The words “sections 556 and 557 of this title apply instead of this subsection” are substituted for “the requirements of sections 1006 and 1007 of this title shall apply in place of the provisions of this subsection”.

Standard changes are made to conform with the definitions applicable and the style of this title as outlined in the preface to the report.

## CODIFICATION

Section 553 of former Title 5, Executive Departments and Government Officers and Employees, was transferred to section 2245 of Title 7, Agriculture.

## EXECUTIVE ORDER NO. 12044

Ex. Ord. No. 12044, Mar. 23, 1978, 43 F.R. 12661, as amended by Ex. Ord. No. 12221, June 27, 1980, 45 F.R. 44249, which related to the improvement of Federal regulations, was revoked by Ex. Ord. No. 12291, Feb. 17, 1981, 46 F.R. 13193, formerly set out as a note under section 601 of this title.

## § 554. Adjudications

(a) This section applies, according to the provisions thereof, in every case of adjudication required by statute to be determined on the record after opportunity for an agency hearing, except to the extent that there is involved—

(1) a matter subject to a subsequent trial of the law and the facts de novo in a court;

(2) the selection or tenure of an employee, except a<sup>1</sup> administrative law judge appointed under section 3105 of this title;

(3) proceedings in which decisions rest solely on inspections, tests, or elections;

(4) the conduct of military or foreign affairs functions;

(5) cases in which an agency is acting as an agent for a court; or

(6) the certification of worker representatives.

(b) Persons entitled to notice of an agency hearing shall be timely informed of—

(1) the time, place, and nature of the hearing;

(2) the legal authority and jurisdiction under which the hearing is to be held; and

(3) the matters of fact and law asserted.

When private persons are the moving parties, other parties to the proceeding shall give prompt notice of issues controverted in fact or law; and in other instances agencies may by rule require responsive pleading. In fixing the time and place for hearings, due regard shall be had for the convenience and necessity of the parties or their representatives.

(c) The agency shall give all interested parties opportunity for—

<sup>1</sup> So in original.

(1) the submission and consideration of facts, arguments, offers of settlement, or proposals of adjustment when time, the nature of the proceeding, and the public interest permit; and

(2) to the extent that the parties are unable so to determine a controversy by consent, hearing and decision on notice and in accordance with sections 556 and 557 of this title.

(d) The employee who presides at the reception of evidence pursuant to section 556 of this title shall make the recommended decision or initial decision required by section 557 of this title, unless he becomes unavailable to the agency. Except to the extent required for the disposition of ex parte matters as authorized by law, such an employee may not—

(1) consult a person or party on a fact in issue, unless on notice and opportunity for all parties to participate; or

(2) be responsible to or subject to the supervision or direction of an employee or agent engaged in the performance of investigative or prosecuting functions for an agency.

An employee or agent engaged in the performance of investigative or prosecuting functions for an agency in a case may not, in that or a factually related case, participate or advise in the decision, recommended decision, or agency review pursuant to section 557 of this title, except as witness or counsel in public proceedings. This subsection does not apply—

(A) in determining applications for initial licenses;

(B) to proceedings involving the validity or application of rates, facilities, or practices of public utilities or carriers; or

(C) to the agency or a member or members of the body comprising the agency.

(e) The agency, with like effect as in the case of other orders, and in its sound discretion, may issue a declaratory order to terminate a controversy or remove uncertainty.

(Pub. L. 89-554, Sept. 6, 1966, 80 Stat. 384; Pub. L. 95-251, § 2(a)(1), Mar. 27, 1978, 92 Stat. 183.)

## HISTORICAL AND REVISION NOTES

<i>Derivation</i>	<i>U.S. Code</i>	<i>Revised Statutes and Statutes at Large</i>
.....	5 U.S.C. 1004.	June 11, 1946, ch. 324, § 5, 60 Stat. 239.

In subsection (a)(2), the word “employee” is substituted for “officer or employee of the United States” in view of the definition of “employee” in section 2105.

In subsection (a)(4), the word “naval” is omitted as included in “military”.

In subsection (a)(5), the word “or” is substituted for “and” since the exception is applicable if any one of the factors are involved.

In subsection (a)(6), the word “worker” is substituted for “employee”, since the latter is defined in section 2105 as meaning Federal employees.

In subsection (b), the word “When” is substituted for “In instances in which”.

In subsection (c)(2), the comma after the word “hearing” is omitted to correct an editorial error.

In subsection (d), the words “The employee” and “such an employee” are substituted in the first two sentences for “The same officers” and “such officers” in view of the definition of “employee” in section 2105.



## 16 U.S.C.A. § 1537

## § 1537. International cooperation

Currentness

**(a) Financial assistance**

As a demonstration of the commitment of the United States to the worldwide protection of endangered species and threatened species, the President may, subject to the provisions of [section 1306 of Title 31](#), use foreign currencies accruing to the United States Government under the Food for Peace Act [[7 U.S.C.A. § 1691 et seq.](#)] or any other law to provide to any foreign country (with its consent) assistance in the development and management of programs in that country which the Secretary determines to be necessary or useful for the conservation of any endangered species or threatened species listed by the Secretary pursuant to [section 1533](#) of this title. The President shall provide assistance (which includes, but is not limited to, the acquisition, by lease or otherwise, of lands, waters, or interests therein) to foreign countries under this section under such terms and conditions as he deems appropriate. Whenever foreign currencies are available for the provision of assistance under this section, such currencies shall be used in preference to funds appropriated under the authority of [section 1542](#) of this title.

**(b) Encouragement of foreign programs**

In order to carry out further the provisions of this chapter, the Secretary, through the Secretary of State, shall encourage--

- (1) foreign countries to provide for the conservation of fish or wildlife and plants including endangered species and threatened species listed pursuant to [section 1533](#) of this title;
- (2) the entering into of bilateral or multilateral agreements with foreign countries to provide for such conservation; and
- (3) foreign persons who directly or indirectly take fish or wildlife or plants in foreign countries or on the high seas for importation into the United States for commercial or other purposes to develop and carry out with such assistance as he may provide, conservation practices designed to enhance such fish or wildlife or plants and their habitat.

**(c) Personnel**

After consultation with the Secretary of State, the Secretary may--

- (1) assign or otherwise make available any officer or employee of his department for the purpose of cooperating with foreign countries and international organizations in developing personnel resources and programs which promote the conservation of fish or wildlife or plants; and
- (2) conduct or provide financial assistance for the educational training of foreign personnel, in this country or abroad, in fish, wildlife, or plant management, research and law enforcement and to render professional assistance abroad in such matters.

**(d) Investigations**

After consultation with the Secretary of State and the Secretary of the Treasury, as appropriate, the Secretary may conduct or cause to be conducted such law enforcement investigations and research abroad as he deems necessary to carry out the purposes of this chapter.

16 U.S.C.A. § 1539

§ 1539. Exceptions

[Currentness](#)

**(a) Permits**

**(1)** The Secretary may permit, under such terms and conditions as he shall prescribe--

**(A)** any act otherwise prohibited by [section 1538](#) of this title for scientific purposes or to enhance the propagation or survival of the affected species, including, but not limited to, acts necessary for the establishment and maintenance of experimental populations pursuant to subsection (j) of this section; or

**(B)** any taking otherwise prohibited by [section 1538\(a\)\(1\)\(B\)](#) of this title if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

**(2)(A)** No permit may be issued by the Secretary authorizing any taking referred to in paragraph (1)(B) unless the applicant therefor submits to the Secretary a conservation plan that specifies--

**(i)** the impact which will likely result from such taking;

**(ii)** what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps;

**(iii)** what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and

**(iv)** such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan.

Code of Federal Regulations

Title 50. Wildlife and Fisheries

Chapter I. United States Fish and Wildlife Service, Department of the Interior

Subchapter B. Taking, Possession, Transportation, Sale, Purchase, Barter, Exportation, and Importation  
of Wildlife and Plants

Part 17. Endangered and Threatened Wildlife and Plants (Refs & Annos)

Subpart H. Experimental Populations (Refs & Annos)

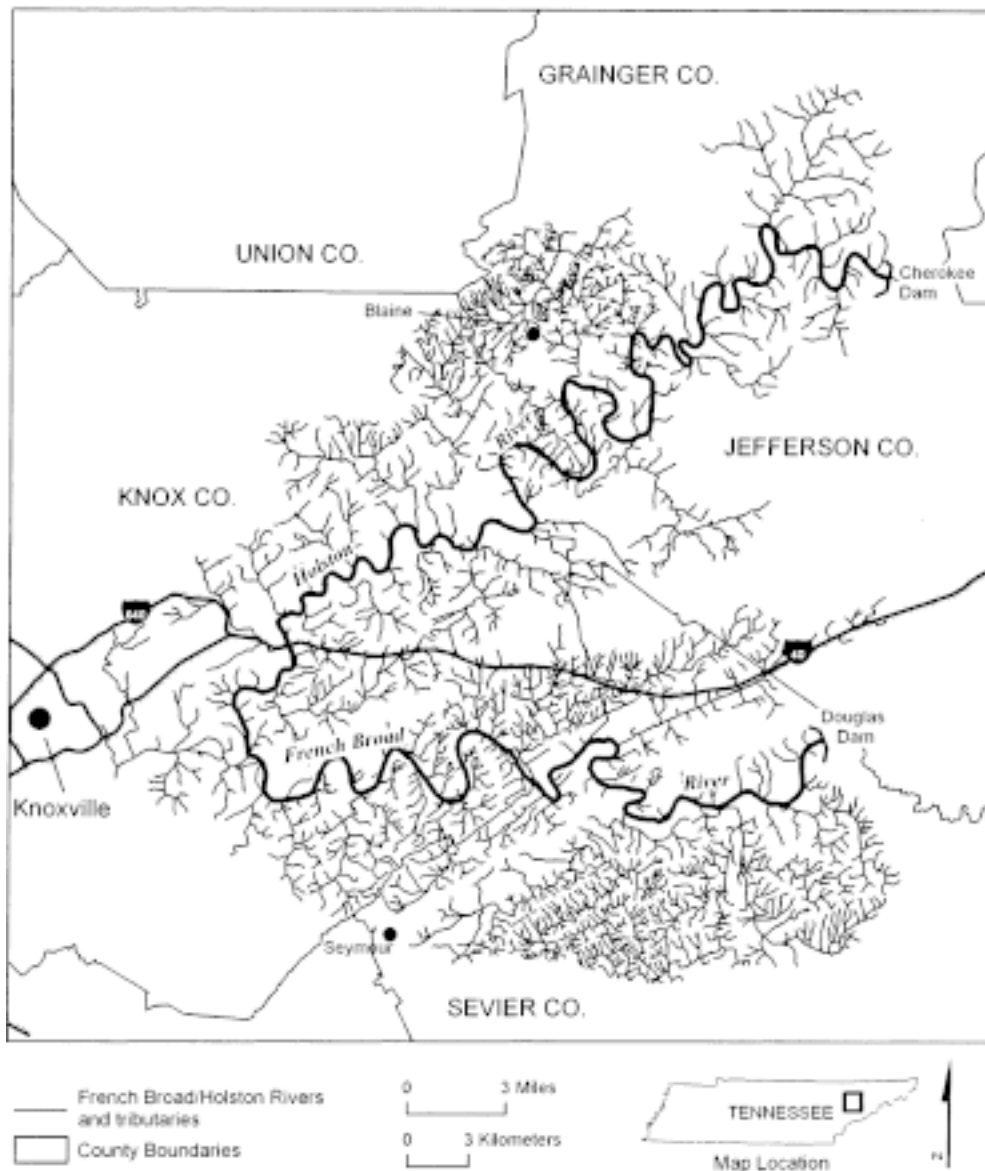
17.84 Special rules—vertebrates.

Effective: December 16, 2015

[Currentness](#)



Portion of the Lower French Broad River Watershed and the Lower Holston River Watershed Covered by the 2 Federally Listed Endangered Fishes: Duskytail Darter and Pygmy Madtom; and 3 Federally Listed Threatened Fishes: Slender Chub, Spottfin Chub, and Yellowfin Madtom Nonessential Experimental Population Designation.



(n) Gray wolf (*Canis lupus*).

(1) The gray wolves (wolf) identified in paragraph (n)(9)(i) of this section are a nonessential experimental population. These wolves will be managed in accordance with the respective provisions of this paragraph (n) in the boundaries of the nonessential experimental population (NEP) areas within any State or Tribal reservation that has a wolf management plan that has been approved by the Service, as further provided in this paragraph (n). Furthermore, any State or Tribe that has a wolf management plan approved by the Service can petition the Secretary of the Department of the Interior (DOI) to assume the lead authority for wolf management under this rule within the borders of the NEP areas in their respective State or reservation.

(2) The Service finds that management of nonessential experimental gray wolves, as defined in this paragraph (n), will further the conservation of the species.

(3) Definitions of terms used in paragraph (n) of this section follow:

**Active den site**—A den or a specific above-ground site that is being used on a daily basis by wolves to raise newborn pups during the period April 1 to June 30.

**Breeding pair**—An adult male and an adult female wolf that, during the previous breeding season, produced at least two pups that survived until December 31 of the year of their birth.

**Designated agent**—Includes Federal agencies authorized or directed by the Service, and States or Tribes with a wolf management plan approved by the Director of the Service and with established cooperative agreements with us or Memoranda of Agreement (MOAs) approved by the Secretary of the DOI. Federal agencies, States, or Tribes may become “designated agents” through cooperative agreements with the Service whereby they agree to assist the Service to implement some portions of this rule. If a State or Tribe becomes a “designated agent” through a cooperative agreement, the Service will help coordinate their activities and retain authority for program direction, oversight, and guidance. States and Tribes with approved plans also may become “designated agents” by submitting a petition to the Secretary to establish an MOA under this rule. Once accepted by the Secretary, the MOA may allow the State or Tribe to assume lead authority for wolf management and to implement the portions of their State or Tribal plans that are consistent with this rule. The Service oversight (aside from Service law enforcement investigations) under an MOA is limited to monitoring compliance with this rule, issuing written authorizations for wolf take on reservations without approved wolf management plans, and an annual review of the State or Tribal program to ensure the wolf population is being maintained above recovery levels.

**Domestic animals**—Animals that have been selectively bred over many generations to enhance specific traits for their use by humans, including use as pets. This includes livestock (as defined below) and dogs.

**Intentional harassment**—The deliberate and pre-planned harassment of wolves, including by less-than-lethal munitions (such as 12-gauge shotgun rubber-bullets and bean-bag shells), that are designed to cause physical discomfort and temporary physical injury but not death. The wolf may have been tracked, waited for, chased, or searched out and then harassed.

**In the act of attacking**—The actual biting, wounding, grasping, or killing of livestock or dogs, or chasing, molesting, or harassing by wolves that would indicate to a reasonable person that such biting, wounding, grasping, or killing of livestock or dogs is likely to occur at any moment.

**Landowner**—An owner of private land, or his/her immediate family members, or the owner's employees who are currently employed to actively work on that private land. In addition, the owner(s) (or his/her employees) of livestock that are currently and legally grazed on that private land and other lease-holders on that private land (such as outfitters or guides who lease hunting rights from private landowners), are considered landowners on that private land for the purposes of this regulation. Private land, under this regulation, also includes all non-Federal land and land within Tribal reservations. Individuals legally using Tribal lands in States with approved plans are considered landowners for the purposes of this rule. “Landowner” in this regulation includes legal grazing permittees or their current employees on State, county, or city public or Tribal grazing lands.

**Legally present**—A person is legally present when:

(i) On his or her own property;

(ii) Not trespassing and has the landowner's permission to bring his or her stock animal or dog on the property; or

(iii) Abiding by regulations governing legal presence on public lands.

**Livestock**—Cattle, sheep, horses, mules, goats, domestic bison, and herding and guarding animals (llamas, donkeys, and certain breeds of dogs commonly used for herding or guarding livestock). Livestock excludes dogs that are not being used for livestock guarding or herding.

**Noninjurious**—Does not cause either temporary or permanent physical damage or death.

**Opportunistic harassment**—Harassment without the conduct of prior purposeful actions to attract, track, wait for, or search out the wolf.

**Private land**—All land other than that under Federal Government ownership and administration and including Tribal reservations.

**Problem wolves**—Wolves that have been confirmed by the Service or our designated agent(s) to have attacked or been in the act of attacking livestock or dogs on private land or livestock on public land within the past 45 days. Wolves that we or our designated agent(s) confirm to have attacked any other domestic animals on private land twice within a calendar year are considered problem wolves for purposes of agency wolf control actions.

**Public land**—Federal land such as that administered by the National Park Service, Bureau of Land Management, USDA Forest Service, Bureau of Reclamation, Department of Defense, or other agencies with the Federal Government.

**Public land permittee**—A person or that person's employee who has an active, valid Federal land-use permit to use specific Federal lands to graze livestock, or operate an outfitter or guiding business that uses livestock. This definition does not include private individuals or organizations who have Federal permits for other activities on public land such as collecting firewood, mushrooms, antlers, or Christmas trees; logging; mining; oil or gas development; or other uses that do not require livestock. In recognition of the special and unique authorities of Tribes and their relationship with the U.S. Government, for the purposes of this rule, the definition includes Tribal members who legally graze their livestock on ceded public lands under recognized Tribal treaty rights.

**Remove**—Place in captivity, relocate to another location, or kill.

**Research**—Scientific studies resulting in data that will lend to enhancement of the survival of the gray wolf.

**Rule**—Federal regulations—“This rule” or “this regulation” refers to this final NEP regulation.

**Stock animal**—A horse, mule, donkey, llama, or goat used to transport people or their possessions.

**Unacceptable impact**—Impact to ungulate population or herd where a State or Tribe has determined that wolves are one of the major causes of the population or herd not meeting established State or Tribal management goals.

**Ungulate population or herd**—An assemblage of wild ungulates living in a given area.

**Wounded**—Exhibiting scraped or torn hide or flesh, bleeding, or other evidence of physical damage caused by a wolf bite.

(4) Allowable forms of take of gray wolves. The following activities, only in the specific circumstances described under this paragraph (n)(4), are allowed: Opportunistic harassment; intentional harassment; take on private land; take on public land except land administered by National Parks; take in response to impacts on wild ungulate populations; take in defense of human life; take to protect human safety; take by designated agents to remove problem wolves; incidental take; take under permits; take per authorizations for employees of designated agents; take for research purposes; and take to protect stock animals and dogs. Other than as expressly provided in this rule, all other forms of take are considered a violation of section 9 of the Act. Any wolf or wolf part taken legally must be turned over to the Service unless otherwise specified in this paragraph (n). Any take of wolves must be reported as outlined in paragraph (n)(6) of this section.

(i) Opportunistic harassment. Anyone may conduct opportunistic harassment of any gray wolf in a noninjurious manner at any time. Opportunistic harassment must be reported to the Service or our designated agent(s) within 7 days as outlined in paragraph (n)(6) of this section.

(ii) Intentional harassment. After we or our designated agent(s) have confirmed wolf activity on private land, on a public land grazing allotment, or on a Tribal reservation, we or our designated agent(s) may issue written take authorization valid for not longer than 1 year, with appropriate conditions, to any landowner or public land permittee to intentionally harass wolves. The harassment must occur in the area and under the conditions as specifically identified in the written take authorization.

(iii) Take by landowners on their private land. Landowners may take wolves on their private land in the following two additional circumstances:

(A) Any landowner may immediately take a gray wolf in the act of attacking livestock or dogs on his or her private land, provided the landowner provides evidence of livestock or dogs recently (less than 24 hours) wounded, harassed, molested, or killed by wolves, and we or our designated agent(s) are able to confirm that the livestock or dogs were wounded, harassed, molested, or killed by wolves. The carcass of any wolf taken and the area surrounding it should not be disturbed in order to preserve physical evidence that the take was conducted according to this rule. The take of any wolf without such evidence of a direct and immediate threat may be referred to the appropriate authorities for prosecution.

(B) A landowner may take wolves on his or her private land if we or our designated agent issued a “shoot-on-sight” written take authorization of limited duration (45 days or less), and if:

(1) This landowner's property has had at least one depredation by wolves on livestock or dogs that has been confirmed by us or our designated agent(s) within the past 30 days; and

(2) We or our designated agent(s) have determined that problem wolves are routinely present on that private property and present a significant risk to the health and safety of other livestock or dogs; and

(3) We or our designated agent(s) have authorized lethal removal of problem wolves from that same property. The landowner must conduct the take in compliance with the written take authorization issued by the Service or our designated agent(s).



(iv) Take on public land. Any livestock producer and public land permittee (see definitions in paragraph (n)(3) of this section) who is legally using public land under a valid Federal land-use permit may immediately take a gray wolf in the act of attacking his or her livestock on the person's allotment or other area authorized for his or her use without prior written authorization, provided that that producer or permittee provides evidence of livestock recently (less than 24 hours) wounded, harassed, molested, or killed by wolves, and we or our designated agent(s) are able to confirm that the livestock were wounded, harassed, molested, or killed by wolves. The carcass of any wolf taken and the area surrounding it should not be disturbed, in order to preserve physical evidence that the take was conducted according to this rule. The take of any wolf without such evidence may be referred to the appropriate authorities for prosecution.

(A) At our or our designated agent(s)' discretion, we or our designated agent(s) also may issue a shoot-on-sight written take authorization of limited duration (45 days or less) to a public land grazing permittee to take problem wolves on that permittee's active livestock grazing allotment if:

- (1) The grazing allotment has had at least one depredation by wolves on livestock that has been confirmed by us or our designated agent(s) within the past 30 days; and
- (2) We or our designated agent(s) have determined that problem wolves are routinely present on that allotment and present a significant risk to the health and safety of livestock; and
- (3) We or our designated agent(s) have authorized lethal removal of problem wolves from that same allotment.

(B) The permittee must conduct the take in compliance with the written take authorization issued by the Service or our designated agent(s).

(v) Take in response to wild ungulate impacts. If wolf predation is having an unacceptable impact on wild ungulate populations (deer, elk, moose, bighorn sheep, mountain goats, antelope, or bison) as determined by the respective State or Tribe, a State or Tribe may lethally remove the wolves in question.

(A) In order for this provision to apply, the State or Tribes must prepare a science-based document that:

- (1) Describes the basis of ungulate population or herd management objectives, what data indicate that the ungulate population or herd is below management objectives, what data indicate that wolves are a major cause of the unacceptable impact to the ungulate population or herd, why wolf removal is a warranted solution to help restore the ungulate population or herd to State or Tribal management objectives, the level and duration of wolf removal being proposed, and how ungulate population or herd response to wolf removal will be measured and control actions adjusted for effectiveness;
- (2) Demonstrates that attempts were and are being made to address other identified major causes of ungulate herd or population declines or the State or Tribe commits to implement possible remedies or conservation measures in addition to wolf removal; and

(3) Provides an opportunity for peer review and public comment on their proposal prior to submitting it to the Service for written concurrence. The State or Tribe must:

(i) Conduct the peer review process in conformance with the Office of Management and Budget's [Final Information Quality Bulletin for Peer Review \(70 FR 2664](#), January 14, 2005) and include in their proposal an explanation of how the bulletin's standards were considered and satisfied; and

(ii) Obtain at least five independent peer reviews from individuals with relevant expertise other than staff employed by a State, Tribal, or Federal agency directly or indirectly involved with predator control or ungulate management in Idaho, Montana, or Wyoming.

(B) Before we authorize lethal removal, we must determine that an unacceptable impact to wild ungulate populations or herds has occurred. We also must determine that the proposed lethal removal is science-based, will not contribute to reducing the wolf population in the State below 20 breeding pairs and 200 wolves, and will not impede wolf recovery.

(vi) Take in defense of human life. Any person may take a gray wolf in defense of the individual's life or the life of another person. The unauthorized taking of a wolf without demonstration of an immediate and direct threat to human life may be referred to the appropriate authorities for prosecution.

(vii) Take to protect human safety. We or our designated agent(s) may promptly remove any wolf that we or our designated agent(s) determines to be a threat to human life or safety.

(viii) Take of problem wolves by Service personnel or our designated agent(s). We or our designated agent(s) may carry out harassment, nonlethal control measures, relocation, placement in captivity, or lethal control of problem wolves. To determine the presence of problem wolves, we or our designated agent(s) will consider all of the following:

(A) Evidence of wounded livestock, dogs, or other domestic animals, or remains of livestock, dogs, or domestic animals that show that the injury or death was caused by wolves, or evidence that wolves were in the act of attacking livestock, dogs, or domestic animals;

(B) The likelihood that additional wolf-caused losses or attacks may occur if no control action is taken;

(C) Evidence of unusual attractants or artificial or intentional feeding of wolves; and

(D) Evidence that animal husbandry practices recommended in approved allotment plans and annual operating plans were followed.

(ix) Incidental take. Take of a gray wolf is allowed if the take is accidental and incidental to an otherwise lawful activity and if reasonable due care was practiced to avoid such take, and such take is reported within 24 hours. Incidental take is not allowed if the take is not accidental or if reasonable due care was not practiced to avoid such take, or it was not reported within 24 hours (we may allow additional time if access to the site of the take is limited), and we may refer

such taking to the appropriate authorities for prosecution. Shooters have the responsibility to identify their target before shooting. Shooting a wolf as a result of mistaking it for another species is not considered accidental and may be referred to the appropriate authorities for prosecution.

(x) Take under permits. Any person with a valid permit issued by the Service under § 17.32, or our designated agent(s), may take wolves in the wild, pursuant to terms of the permit.

(xi) Additional take authorization for agency employees. When acting in the course of official duties, any employee of the Service or our designated agent(s) may take a wolf or wolf-like canid for the following purposes:

(A) Scientific purposes;

(B) To avoid conflict with human activities;

(C) To further wolf survival and recovery;

(D) To aid or euthanize sick, injured, or orphaned wolves;

(E) To dispose of a dead specimen;

(F) To salvage a dead specimen that may be used for scientific study;

(G) To aid in law enforcement investigations involving wolves; or

(H) To prevent wolves or wolf-like canids with abnormal physical or behavioral characteristics, as determined by the Service or our designated agent(s), from passing on or teaching those traits to other wolves.

(I) Such take must be reported to the Service within 7 days as outlined in paragraph (n)(6) of this section, and specimens are to be retained or disposed of only in accordance with directions from the Service.

(xii) Take for research purposes. We may issue permits under § 17.32, or our designated agent(s) may issue written authorization, for individuals to take wolves in the wild pursuant to approved scientific study proposals. Scientific studies should be reasonably expected to result in data that will lend to development of sound management of the gray wolf, and lend to enhancement of its survival as a species.

(xiii) Take to protect stock animals and dogs. Any person legally present on private or public land, except land administered by the National Park Service, may immediately take a wolf that is in the act of attacking the individual's stock animal or dog, provided that there is no evidence of intentional baiting, feeding, or deliberate attractants of wolves. The person must be able to provide evidence of stock animals or dogs recently (less than 24 hours) wounded, harassed, molested, or killed by wolves, and we or our designated agents must be able to confirm that the stock animals or dogs were wounded,

harassed, molested, or killed by wolves. To preserve evidence that the take of a wolf was conducted according to this rule, the person must not disturb the carcass and the area surrounding it. The take of any wolf without such evidence of a direct and immediate threat may be referred to the appropriate authorities for prosecution.

(5) Federal land use. Restrictions on the use of any Federal lands may be put in place to prevent the take of wolves at active den sites between April 1 and June 30. Otherwise, no additional land-use restrictions on Federal lands, except for National Parks or National Wildlife Refuges, may be necessary to reduce or prevent take of wolves solely to benefit gray wolf recovery under the Act. This prohibition does not preclude restricting land use when necessary to reduce negative impacts of wolf restoration efforts on other endangered or threatened species.

(6) Reporting requirements. Except as otherwise specified in paragraph (n) of this section or in a permit, any take of a gray wolf must be reported to the Service or our designated agent(s) within 24 hours. We will allow additional reasonable time if access to the site is limited. Report any take of wolves, including opportunistic harassment, to U.S. Fish and Wildlife Service, Montana Ecological Services Office (585 Shepard Way, Suite 1, Helena, Montana 59601, 406-449-5225; facsimile 406-449-5339), or a Service-designated agent of another Federal, State, or Tribal agency. Unless otherwise specified in paragraph (n) of this section, any wolf or wolf part taken legally must be turned over to the Service, which will determine the disposition of any live or dead wolves.

(7) No person shall possess, sell, deliver, carry, transport, ship, import, or export by any means whatsoever, any wolf or part thereof from the experimental populations taken in violation of the regulations in paragraph (n) of this section or in violation of applicable State or Tribal fish and wildlife laws or regulations or the Act.

(8) It is unlawful for any person to attempt to commit, solicit another to commit, or cause to be committed any offense defined in this section.

(9) The sites for these experimental populations are within the historic range of the species as designated in paragraph (i)(7) of this section:

(i) The nonessential experimental population area includes all of Wyoming.

(ii) All wolves found in the wild within the boundaries of this experimental area are considered nonessential experimental animals.

(10) Wolves in the experimental population areas will be monitored by radio-telemetry or other standard wolf population monitoring techniques as appropriate. Any animal that is sick, injured, or otherwise in need of special care may be captured by authorized personnel of the Service or our designated agent(s) and given appropriate care. Such an animal will be released back into its respective area as soon as possible, unless physical or behavioral problems make it necessary to return the animal to captivity or euthanize it.

(11) Memoranda of Agreement (MOAs). Any State or Tribe with gray wolves, subject to the terms of this paragraph (n), may petition the Secretary for an MOA to take over lead management responsibility and authority to implement this rule by managing the nonessential experimental gray wolves in that State or on that Tribal reservation, and implement all



parts of their approved State or Tribal plan that are consistent with this rule, provided that the State or Tribe has a wolf management plan approved by the Secretary.

(i) A State or Tribal petition for wolf management under an MOA must show:

(A) That authority and management capability resides in the State or Tribe to conserve the gray wolf throughout the geographical range of all experimental populations within the State or within the Tribal reservation.

(B) That the State or Tribe has an acceptable conservation program for the gray wolf, throughout all of the NEP areas within the State or Tribal reservation, including the requisite authority and capacity to carry out that conservation program.

(C) A description of exactly what parts of the approved State or Tribal plan the State or Tribe intends to implement within the framework of this rule.

(D) A description of the State or Tribal management progress will be reported to the Service on at least an annual basis so the Service can determine if State or Tribal management has maintained the wolf population above recovery levels and was conducted in full compliance with this rule.

(ii) The Secretary will approve such a petition upon a finding that the applicable criteria are met and that approval is not likely to jeopardize the continued existence of the endangered gray wolf, as defined in [§ 17.11\(h\)](#).

(iii) If the Secretary approves the petition, the Secretary will enter into an MOA with the Governor of that State or appropriate Tribal representative.

(iv) An MOA for State or Tribal management as provided in this section may allow a State or Tribe to become designated agents and lead management of nonessential experimental gray wolf populations within the borders of their jurisdictions in accordance with the State's or Tribe's wolf management plan approved by the Service, except that:

(A) The MOA may not provide for any form of management inconsistent with the protection provided to the species under this rule, without further opportunity for appropriate public comment and review and amendment of this rule;

(B) The MOA cannot vest the State or Tribe with any authority over matters concerning section 4 of the Act (determining whether a species warrants listing);

(C) The MOA may not provide for public hunting or trapping absent a finding by the Secretary of an extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved; and

(D) In the absence of a Tribal wolf management plan or cooperative agreement, the MOA cannot vest a State with the authority to issue written authorizations for wolf take on reservations. The Service will retain the authority to issue these written authorizations until a Tribal wolf management plan is approved.

(v) The MOA for State or Tribal wolf management must provide for joint law enforcement responsibilities to ensure that the Service also has the authority to enforce the State or Tribal management program prohibitions on take.

(vi) The MOA may not authorize wolf take beyond that stated in the experimental population rules but may be more restrictive.

(vii) The MOA will expressly provide that the results of implementing the MOA may be the basis upon which State or Tribal regulatory measures will be judged for delisting purposes.

(viii) The authority for the MOA will be the Act, the Fish and Wildlife Act of 1956 ([16 U.S.C. 742a–742j](#)), and the Fish and Wildlife Coordination Act ([16 U.S.C. 661–667e](#)), and any applicable treaty.

(ix) In order for the MOA to remain in effect, the Secretary must find, on an annual basis, that the management under the MOA is not jeopardizing the continued existence of the endangered gray wolf as defined in [§ 17.11\(h\)](#). The Secretary or State or Tribe may terminate the MOA upon 90 days notice if:

(A) Management under the MOA is likely to jeopardize the continued existence of the endangered gray wolf as defined in [§ 17.11\(h\)](#); or

(B) The State or Tribe has failed materially to comply with this rule, the MOA, or any relevant provision of the State or Tribal wolf management plan; or

(C) The Service determines that biological circumstances within the range of the gray wolf indicate that delisting the species is not warranted; or

(D) The States or Tribes determine that they no longer want the wolf management authority vested in them by the Secretary in the MOA.



# Federal Register

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**List of Subjects in 40 CFR Part 799**

Environmental protection, Chemicals, Hazardous substances, Health, Reporting and recordkeeping requirements.

Dated: September 8, 2010.

**Stephen A. Owens,**

*Assistant Administrator, Office of Chemical Safety and Pollution Prevention.*

[FR Doc. 2010-22862 Filed 9-13-10; 8:45 am]

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**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17**

[Docket No. FWS-R3-ES-2010-0062; 92220-1113-0000-C6]

**Endangered and Threatened Wildlife and Plants; 90-Day Finding on Petitions To Delist the Gray Wolf in Minnesota, Wisconsin, Michigan, and the Western Great Lakes**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Notice of petition finding and initiation of status review.

**SUMMARY:** We, the U.S. Fish and Wildlife Service, announce a 90-day finding on petitions to remove (delist) the gray wolf in the western Great Lakes from the List of Endangered and Threatened Wildlife (List) established under the Endangered Species Act of 1973, as amended (Act). Based on our review, we find that the petitions present substantial scientific or commercial information indicating that removing the gray wolf in Minnesota, Wisconsin, and Michigan from the List may be warranted. Therefore, with the publication of this notice, we are initiating a review of the status of the species to determine if delisting in Minnesota, Wisconsin, and Michigan is warranted. To ensure that this status review is comprehensive, we are requesting scientific and commercial data and other information regarding the gray wolf in Minnesota, Wisconsin, and Michigan. Based on the status review, we will issue a 12-month finding on the petitions, which will address whether any of the petitioned actions are warranted, as provided in section 4(b)(3)(B) of the Act.

**DATES:** To allow us adequate time to conduct this review, we request that we receive information on or before November 15, 2010. Please note that if you are using the Federal eRulemaking Portal (see **ADDRESSES** section, below),

the deadline for submitting an electronic comment is 12:00 Midnight, Eastern Standard Time on this date.

**ADDRESSES:** You may submit information by one of the following methods:

- **Federal eRulemaking Portal:** <http://www.regulations.gov>. In the box that reads "Enter Keyword or ID," enter the Docket number for this finding, which is [FWS-R3-ES-2010-0062]. Check the box that reads "Open for Comment/ Submission," and then click the Search button. You should then see an icon that reads "Submit a Comment." Please ensure that you have found the correct rulemaking before submitting your comment.

- **U.S. mail or hand-delivery:** Public Comments Processing, Attn: FWS-R3-ES-2010-0062, Division of Policy and Directives Management, U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, Suite 222, Arlington, VA 22203. We will post all information we receive on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see the **Request for Information** section below for more details).

After the date specified in **DATES**, you must submit information directly to the Regional Office (see **FOR FURTHER INFORMATION CONTACT** section below). Please note that we might not be able to address or incorporate information that we receive after the above requested date.

**FOR FURTHER INFORMATION CONTACT:**

Laura Ragan, Endangered Species Listing Coordinator, Midwest Regional Office, U.S. Fish and Wildlife Service, 1 Federal Drive, Fort Snelling, Minnesota, 55111, by telephone (612-713-5350), or by facsimile (612-713-5292). If you use a telecommunications device for the deaf (TDD), please call the Federal Information Relay Service (FIRS) at 800-877-8339.

**SUPPLEMENTARY INFORMATION:****Request for Information**

When we make a finding that a petition to remove (delist) a species from the List of Endangered and Threatened Wildlife presents substantial information that the petitioned action may be warranted, we are required to promptly commence a review of the status of the species (status review). For the status review to be complete and based on the best available scientific and commercial information, we request information on the gray wolf in Minnesota, Wisconsin, and Michigan from governmental agencies, Native American Tribes, the scientific community, industry, and any other

interested parties. We seek information on:

- (1) The species' biology, range, and population trends, including:
  - (a) Habitat requirements for feeding, breeding, and sheltering;
  - (b) Genetics and taxonomy;
  - (c) Historical and current range including distribution patterns;
  - (d) Historical and current population levels, and current and projected trends; and
  - (e) Past and ongoing conservation measures for the species, its habitat or both.
- (2) The factors that are the basis for making a delisting determination for a species under section 4(a) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*), which are:
  - (a) The present or threatened destruction, modification, or curtailment of its habitat or range;
  - (b) Overutilization for commercial, recreational, scientific, or educational purposes;
  - (c) Disease or predation;
  - (d) The inadequacy of existing regulatory mechanisms; or
  - (e) Other natural or manmade factors affecting its continued existence.
- (3) Current or planned activities in the western Great Lakes region and their possible impacts on the wolf and its habitat;
- (4) Information concerning the adequacy of the recovery criteria described in the 1992 Recovery Plan for the Eastern Timber Wolf;
- (5) The extent and adequacy of Federal, State, and tribal protection and management that would be provided to the wolf in the western Great Lakes region as a delisted species;
- (6) Whether gray wolves in Minnesota alone; or in Minnesota and Wisconsin combined; or in Minnesota, Wisconsin, and Michigan combined constitute distinct population segments or entities that which may be removed from the List of Endangered and Threatened Wildlife under the Act; and
- (7) Information or data regarding the taxonomy of wolves in the western Great Lakes region.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Submissions merely stating support for or opposition to the action under consideration without providing supporting information, although noted, will not be considered in making a determination. Section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or



threatened species must be made “solely on the basis of the best scientific and commercial data available.”

You may submit your information concerning this status review by one of the methods listed in the **ADDRESSES** section. If you submit information via <http://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the Web site. If you submit a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this personal identifying information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on <http://www.regulations.gov>.

Information and supporting documentation that we received and used in preparing this finding is available for you to review at <http://www.regulations.gov>, or you may make an appointment during normal business hours at the U.S. Fish and Wildlife Service, Midwest Regional Office (see **FOR FURTHER INFORMATION CONTACT**).

### Background

Section 4(b)(3)(A) of the Act (16 U.S.C. 1533(b)(3)(A)) requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. We are to base this finding on information provided in the petition, supporting information submitted with the petition, and information otherwise available in our files. To the maximum extent practicable, we are to make this finding within 90 days of our receipt of the petition and publish our notice of the finding promptly in the **Federal Register**.

Our standard for substantial scientific or commercial information within the Code of Federal Regulations (CFR) with regard to a 90-day petition finding is “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted” (50 CFR 424.14(b)). If we find that substantial scientific or commercial information was presented, we are required to promptly conduct a species status review, which we subsequently summarize in our 12-month finding.

### Petition History

On March 15, 2010, we received a petition from the Minnesota Department of Natural Resources (MNDNR) requesting that the gray wolf in Minnesota be removed from the lists of

endangered or threatened species under the Act. In an April 16, 2010, letter to the MNDNR, we responded that we received the petition and provided an explanation of the petition process. On April 26, 2010, we received a petition from the Wisconsin Department of Natural Resources (WDNR) requesting that the gray wolf in Minnesota and Wisconsin be removed from the lists of endangered or threatened species under the Act. In a May 14, 2010 letter, to the WDNR, we responded that we received the petition and provided an explanation of the petition process. On April 26, 2010, we received a petition from the U.S. Sportsmen’s Alliance, representing five other organizations, requesting that gray wolves in the Great Lakes area be removed from the lists of endangered or threatened species under the Act. In a May 28, 2010, letter to the U.S. Sportsmen’s Alliance, we responded that we received the petition and provided an explanation of the petition process. On June 17, 2010, we received a petition from Safari Club International, Safari Club International Foundation and the National Rifle Association of America requesting that wolves of the western Great Lakes be removed from the list of endangered and threatened species. In a June 30, 2010, letter to the Safari Club International we responded that we received the petition and provided an explanation of the petition process.

All of the petitions clearly identified themselves as such and included the requisite identification information from the petitioner, as required by 50 CFR 424.14(a). This finding addresses the four petitions.

### Previous Federal Actions

The eastern timber wolf (*Canis lupus lycaon*) was listed as endangered in Minnesota and Michigan, and the northern Rocky Mountain wolf (*C. l. irremotus*) was listed as endangered in Montana and Wyoming in the first list of species that were protected under the 1973 Act, published in May 1974 (USDI 1974). A third gray wolf subspecies, the Mexican wolf (*C. l. baileyi*), was listed as endangered on April 28, 1976, (41 FR 17736) with its known range given as “Mexico, USA (Arizona, New Mexico, Texas).” On June 14, 1976, (41 FR 240624) the subspecies *C. l. monstabilis* was listed as endangered (under the misleading common name “Gray wolf”), and its range was described as “Texas, New Mexico, Mexico.”

On March 9, 1978, we published a rule (43 FR 9607) relisting the gray wolf at the species level (*Canis lupus*) as endangered throughout the

conterminous 48 States and Mexico, except for Minnesota, where the gray wolf was reclassified to threatened. In addition, critical habitat was designated in that rulemaking. In 50 CFR 17.95(a), we describe Isle Royale National Park, Michigan, and Minnesota wolf management zones 1, 2, and 3 (delineated in 50 CFR 17.40(d)(1)) as critical habitat. At that time we also developed special regulations under section 4(d) of the Act for managing wolves in Minnesota. The depredation control portion of the special regulation was later modified (50 FR 50792; December 12, 1985); these special regulations are found in 50 CFR 17.40(d)(2).

On April 1, 2003, we published a final rule revising the listing status of the gray wolf across most of the conterminous United States (68 FR 15804). Within that rule, we identified three distinct population segments (DPS) for the gray wolf. Gray wolves in the Western DPS and the Eastern DPS were reclassified from endangered to threatened, except where already classified as threatened or as an experimental population. Gray wolves in the Southwestern DPS retained their previous endangered or experimental population status. The three existing gray wolf experimental population designations were not affected by the April 1, 2003, final rule. We removed gray wolves from the lists of threatened and endangered wildlife in all or parts of 16 southern and eastern States where the species historically did not occur. We also established a new special rule under section 4(d) of the Act for the threatened Western DPS to increase our ability to effectively manage wolf-human conflicts outside the two experimental population areas in the Western DPS. In addition, we established a second section 4(d) rule that applied provisions similar to those previously in effect in Minnesota to most of the Eastern DPS. These two special rules were codified in 50 CFR 17.40(n) and (o), respectively.

On January 31, 2005, and August 19, 2005, U.S. District Courts in Oregon and Vermont, respectively, ruled that the April 1, 2003, final rule violated the Act (*Defenders of Wildlife v. Secretary, U.S. Dep’t of the Interior*, 354 F.Supp.2d 1156 (D.Or. 2005); *National Wildlife Fed’n v. Norton*, 386 F.Supp.2d 553 (D.Vt. 2005)). The Courts’ rulings invalidated the revisions to the gray wolf listing. Therefore, the status of gray wolves outside of Minnesota and outside of areas designated as nonessential experimental populations reverted back to endangered (as had been the case prior to the 2003

reclassification). The courts also invalidated the associated special regulations.

On March 27, 2006, we published a proposal (71 FR 15266–15305) to identify a Western Great Lakes (WGL) DPS of the gray wolf, to remove the WGL DPS from the protections of the Act, to remove designated critical habitat for the gray wolf in Minnesota and Michigan, and to remove special regulations for the gray wolf in Minnesota. The proposal was followed by a 90-day comment period, during which we held four public hearings on the proposal.

On February 8, 2007, we published a final rule identifying a WGL DPS of the gray wolf, removing the WGL DPS from the protections of the Act, removing designated critical habitat for the gray wolf in Minnesota and Michigan, and removing special regulations for the gray wolf in Minnesota (72 FR 6052).

On April 16, 2007, four parties filed a lawsuit against the U.S. Department of the Interior (Department) and the Service, challenging the Service's February 8, 2007 (72 FR 6052), identification and delisting of the WGL DPS. The plaintiffs argued that the Service may not identify a DPS within a broader pre-existing listed entity for the purpose of delisting the DPS. Based on this argument, on September 29, 2008, the U.S. District Court for the District of Columbia remanded and vacated the February 8, 2007, WGL DPS final rule (72 FR 6052). The court found that the Service had made that decision based on its interpretation that the plain meaning of the Act authorizes the Service to identify and delist a DPS within an already-listed entity. The court disagreed, and concluded that the Act is ambiguous as to whether the Service has this authority. The court accordingly remanded the final rule so that the Service could provide a reasoned explanation of how its interpretation is consistent with the text, structure, legislative history, judicial interpretations, and policy objectives of the Act (*Humane Society of the United States v. Kempthorne*, 579 F. Supp. 2d 7 (D.D.C. 2008)).

On December 11, 2008, we published a final rule reinstating protections for the gray wolf in the western Great Lakes and northern Rocky Mountains pursuant to court-orders (73 FR 75356).

On April 2, 2009, we published a final rule identifying the western Great Lakes populations of gray wolves as a DPS, revising the List of Endangered and Threatened Wildlife by removing the DPS from that list, removing designated critical habitat for the gray wolf in Minnesota and Michigan, and removing

special regulations for the gray wolf in Minnesota (74 FR 15070). That final rule addressed the narrow issue objectionable to the court and was otherwise substantially the same as the 2007 vacated rule. We did not seek additional public comment on the 2009 final rule.

On June 15, 2009, five parties filed a complaint against the Department and the Service alleging that we violated the Endangered Species Act, the Administrative Procedure Act (APA), and the Court's Remand Order by publishing the 2009 final rule. *The Humane Society, et al. v. Salazar*, 09–cv–1092 (D.D.C. 2009). On that same day, the plaintiffs also filed a motion for preliminary injunction alleging that we violated the notice and comment requirement of the APA, the Endangered Species Act's requirement that we consider the best available science, and the court's remand order by publishing the 2009 final rule. We conceded that we erred by publishing the 2009 final rule without providing for notice and comment as required by APA (5 U.S.C. 553). On July 2, 2009, a settlement agreement between the parties was signed by the court, remanding and vacating the 2009 final rule.

On September 16, 2009, we published a final rule reinstating protections for the gray wolf in the western Great Lakes pursuant to the settlement agreement and court-order (74 FR 47483).

#### *Species Information*

For a discussion of the biology and ecology of gray wolves and general recovery planning efforts, see the proposed WGL wolf rule published on March 27, 2006, (71 FR 15266–15305), also available on <http://www.fws.gov/midwest/wolf/>.

#### *Defining a Species Under the Act*

Section 3(16) of the Act defines “species” to include “any species or subspecies of fish and wildlife or plants, and any distinct vertebrate population segment of fish or wildlife that interbreeds when mature” (16 U.S.C. 1532 (16)). Our implementing regulations at 50 CFR 424.02 provide further guidance for determining whether a particular taxon or population is a species or subspecies for the purposes of the Act: “The Secretary shall rely on standard taxonomic distinctions and the biological expertise of the Department and the scientific community concerning the relevant taxonomic group” (50 CFR 424.11).

To interpret and implement the distinct vertebrate population segment (DPS) provisions of the Act and Congressional guidance, the Service and

the National Marine Fisheries Service (now the National Oceanic and Atmospheric Administration—Fisheries), published the *Policy Regarding the Recognition of Distinct Vertebrate Population Segments* (DPS Policy) in the **Federal Register** on February 7, 1996 (61 FR 4722). Under the DPS Policy, three elements are considered in the decision regarding the establishment and classification of a population of a vertebrate species as a possible DPS. Similarly, these three elements are applied for additions to and removals from the List of Endangered and Threatened Wildlife and Plants. These elements are: (1) The discreteness of a population in relation to the remainder of the species to which it belongs, (2) the significance of the population segment to the species to which it belongs, and, if these first two criteria are met, (3) the population segment's conservation status in relation to the Act's standards for listing, delisting, or reclassification.

#### **Discreteness**

Under our DPS policy, a population segment of a vertebrate species may be considered discrete if it satisfies either one of the following two conditions: (1) It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors (quantitative measures of genetic or morphological discontinuity may provide evidence of this separation); or (2) It is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act (61 FR 4722).

#### **Significance**

If a population segment is considered discrete under one or more of the conditions described in the Service's DPS policy, its biological and ecological significance will be considered in light of congressional guidance that the authority to list DPSs be used “sparingly” while encouraging the conservation of genetic diversity (see Senate Report 151, 96th Congress, 1st Session). In making this determination, we consider available scientific evidence of the discrete population segment's importance to the taxon to which it belongs. Since precise circumstances are likely to vary considerably from case to case, the DPS policy does not describe all the classes of information that might be used in determining the biological and ecological importance of a discrete

population. However, the DPS policy describes four possible classes of information that provide evidence of a discrete population segment's biological and ecological importance to the taxon to which it belongs. As specified in the DPS policy, this consideration of the population segment's significance may include, but is not limited to, the following:

- (1) Persistence of the discrete population segment in an ecological setting unusual or unique to the taxon;
- (2) Evidence that loss of the discrete population segment would result in a significant gap in the range of a taxon;
- (3) Evidence that the discrete population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range; or
- (4) Evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics.

A population segment needs to satisfy only one of these conditions to be considered significant. Furthermore, other information may be used as appropriate to provide evidence for significance.

#### *Information Provided in the Petitions Regarding the "Species" Requested for Delisting*

##### **Wolves in Minnesota**

The petition from the Minnesota DNR requests removing the "Minnesota wolf species" from the protections of the Act. The petition presents the following information.

In 1978, the Service issued a final rule reclassifying "the gray wolf in the United States and Mexico" and determining critical habitat for the species of gray wolf in Michigan and Minnesota (43 FR 9607). The rule stated, "(t)he reclassification is considered to accurately express the current status of the gray wolf, based solely on an evaluation of the best available biological data."

As stated in Minnesota's March 15, 2010, petition, the Service in 1978 issued a final rule that listed the gray wolf population in Minnesota as threatened and treated the gray wolf in Minnesota as another "species" separate from the gray wolf species that was listed as endangered in the other conterminous 48 States and Mexico (43 FR 9607, March 9, 1978). The 1978 final rule states, "as defined in section 3 of the Act, the term "species" includes any subspecies of fish or wildlife or plants and any other group of fish or wildlife of the same species or smaller taxa in

common spatial arrangement that interbreed when mature. For purposes of this rulemaking, the gray wolf (*Canis lupus*) group in Mexico and the 48 coterminous States of the United States, other than Minnesota, is being considered as one 'species', and the gray wolf group in Minnesota is being considered as another 'species.'" (43 FR 9610).

The 1978 rule stated that this determination was "based solely on an evaluation of the best available biological data." \* \* \* The only major population of the gray wolf remaining anywhere in the 48 conterminous States is in northern Minnesota." *Id.* at 9607 & 9610–11.

##### **Wolves in Minnesota and Wisconsin**

The petition from the Wisconsin DNR requests removing the "Minnesota wolf species," which occurs in Minnesota and Wisconsin, from the protections of the Act. The petition presents the following information.

Gray wolves moved from Minnesota to Wisconsin and Michigan, and are now established in those states. Minnesota gray wolves settled into eastern Pine County along the border with Wisconsin in 1974–1975 (Mech and Nowak 1981, pp. 408–409) and soon spread eastward into Wisconsin. Movements of wolves from Minnesota into Wisconsin and Michigan continued to be documented into the 1990s (Mech et al. 1995; Wydeven 1994). More recent genetic analysis also demonstrates that the wolves currently in Wisconsin and Michigan are genetically similar to wolves in Minnesota (Wheeldon 2009; Fain et al. 2010).

##### **Wolves in Minnesota, Wisconsin, and Michigan**

The petition from the U.S. Sportsmen's Alliance requests removing gray wolves in Minnesota, Wisconsin, and Michigan from the protections of the Act. In the alternative, they request removing gray wolves within the somewhat broader boundaries of the Western Great Lakes Distinct Population Segment (DPS), as identified in the 2007 and 2009 final rules (72 FR 6052, February 8, 2007; 74 FR 15070, April 2, 2009) that were later vacated. The petition references information provided in the petitions from Minnesota and Wisconsin and in the 2007 and 2009 final rules.

We find that the four petitions provide substantial information that the wolf in Minnesota alone; in Minnesota and Wisconsin combined; in Minnesota, Wisconsin, and Michigan; and in the western Great Lakes area, may be considered as a "species" under the Act.

In the 12-month finding, we will fully analyze whether gray wolves in those areas constitute "species" under the Act, and whether they are a threatened species or endangered species under the Act.

#### **Evaluation of Information for This Finding**

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations at 50 CFR 424 set forth the procedures for adding a species to, or removing a species from, the Federal Lists of Endangered and Threatened Wildlife and Plants. A species may be determined to be an endangered species or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;
- (D) The inadequacy of existing regulatory mechanisms; or
- (E) Other natural or manmade factors affecting its continued existence.

We must consider these same five factors in delisting a species. We may remove a threatened species or endangered species from the Act's protections according to 50 CFR 424.11(d) if the best available scientific and commercial data indicate that the species is neither endangered nor threatened for the following reasons:

- (1) The species is extinct;
- (2) The species has recovered and is no longer endangered or threatened; or
- (3) The original scientific data used at the time the species was classified were in error.

In making this 90-day finding, we evaluated whether information regarding the reduction of threats to the gray wolf in Minnesota, Wisconsin, Michigan, and the western Great Lakes area as a whole as presented in the petitions and other information available in our files, is substantial, thereby indicating that the petitioned action may be warranted.

We reviewed the relevant five factors extensively in previous delisting decisions for the gray wolf in an area previously identified as the WGL DPS, which includes Minnesota, Wisconsin, and Michigan (71 FR 15266, March 27, 2006; 74 FR 15070, April 2, 2009). Our files have no information to indicate there has been a significant change since those previous analyses in how these factors affect wolves in the western Great Lakes area. We find that the information provided in the petition, as

well as other information in our files, presents substantial scientific or commercial information indicating that the petitioned action may be warranted in light of one or more of the five factors described in section 4(a)(1) of the Act.

*A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range:* The wolf population in the western Great Lakes area currently occupies all suitable habitat identified for recovery in this area in the 1978 and 1992 Recovery Plans and most of the potentially suitable habitat in the States of Minnesota, Wisconsin, and Michigan. Unsuitable habitat, and the small fragmented areas of suitable habitat away from these core areas, are areas where viable wolf populations are unlikely to develop and persist. Although they may have been historical habitat, many of these areas are no longer suitable for wolves, and none of them are important to meet the biological needs of the species.

*B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes:* No wolves have been legally removed from the wild for educational purposes in recent years. Wolves that have been used for such purposes are the captive-reared offspring of wolves that were already in captivity for other reasons, and this is not likely to change as a result of Federal delisting. We do not expect taking for educational purposes to constitute any threat to wolf populations in the western Great Lakes area for the foreseeable future. See Factor E for a discussion of taking of gray wolves by Native Americans for religious, spiritual, or traditional cultural purposes. See the Depredation Control Programs sections under Factor D for discussion of other past, current, and potential future forms of intentional and accidental take by humans, including depredation control, public safety, and under public harvest. While public harvest may include recreational harvest, public harvest may also serve as a management tool, so it is discussed in Factor D. Taking wolves for scientific or educational purposes in the western Great Lakes area may not be regulated or closely monitored in the future, but the threat to wolves in Minnesota, Wisconsin, and Michigan will not be significant to the long-term viability of the wolf population in the western Great Lakes area. The potential limited commercial and recreational harvest that may occur will be regulated by State or Tribal conservation agencies and is discussed under Factor D.

*C. Disease or Predation:* Several diseases have had noticeable impacts on wolf population growth in the Great

Lakes region in the past. These impacts have been both direct, resulting in mortality of individual wolves, and indirect, by reducing longevity and fecundity of individuals or entire packs or populations. Canine parvovirus stalled wolf population growth in Wisconsin in the early and mid-1980s and has been implicated in the decline in the mid-1980s of the isolated Isle Royale wolf population in Michigan, and in attenuating wolf population growth in Minnesota (Mech in litt. 2006). Sarcoptic mange has affected wolf recovery in Michigan's Upper Peninsula and in Wisconsin over the last 12 years, and it is recognized as a continuing issue. Despite these and other diseases and parasites, the overall trend for wolf populations in the Western Great Lakes area continues to be upward. Wolf management plans for Minnesota, Michigan, and Wisconsin include disease-monitoring components that we expect will identify future disease and parasite problems in time to allow corrective action to avoid a significant decline in overall population viability.

The high reproductive potential of wolves allows wolf populations to withstand relatively high mortality rates, including human-caused mortality. The principle of compensatory mortality is believed to occur in wolf populations. This means that human-caused mortality is not simply added to "natural" mortality, but rather replaces a portion of it. For example, some of the wolves that are killed during depredation control actions would have otherwise died during that year from disease, intraspecific strife, or starvation. Thus, the addition of intentional killing of wolves to a wolf population will reduce the mortality rates from other causes on the population. Based on 19 studies by other wolf researchers, Fuller *et al.* (2003, pp. 182–186) concludes that human-caused mortality can replace about 70 percent of other forms of mortality.

Fuller *et al.* (2003, p. 182 Table 6.8) has summarized the work of various researchers in estimating mortality rates, especially human harvest, that would result in wolf population stability or decline. They provide a number of human-caused and total mortality rate estimates and the observed population effects in wolf populations in the United States and Canada. While variability is apparent, in general, wolf populations increased if their total average annual mortality was 30 percent or less, and populations decreased if their total average annual mortality was 40 percent or more. Four of the cited studies

showed wolf population stability or increases with human-caused mortality rates of 24 to 30 percent. The clear conclusion is that a wolf population with high pup productivity—the normal situation in a wolf population—can withstand levels of overall and of human-caused mortality without suffering a long-term decline in numbers.

The wolf populations in Minnesota, Wisconsin, and Michigan will stop growing when they have saturated the suitable habitat and are curtailed in less suitable areas by natural mortality (disease, starvation, and intraspecific aggression), depredation management, incidental mortality (*e.g.*, road kill), illegal killing, and other means. At that time, we should expect to see population declines in some years followed by short-term increases in other years, resulting from fluctuations in birth and mortality rates. Adequate wolf monitoring programs, however, as described in the Michigan, Wisconsin, and Minnesota wolf management plans are likely to identify high mortality rates or low birth rates that warrant corrective action by the management agencies. The goals of all three State wolf management plans are to maintain wolf populations consistent with or above the objectives in the Federal Eastern Timberwolf Recovery Plan to ensure long-term, viable wolf populations. The State management plans recommend a minimum wolf population of 1,600 in Minnesota, 350 in Wisconsin, and 200 in Michigan.

Despite human-caused mortalities of wolves in Minnesota, Wisconsin, and Michigan, these wolf populations have continued to increase in both numbers and range. As long as other mortality factors do not increase significantly and monitoring is adequate to document, and if necessary counteract, the effects of excessive human-caused mortality should that occur, the Minnesota–Wisconsin–Michigan wolf population will not decline to nonviable levels in the foreseeable future as a result of human-caused killing or other forms of predation.

*D. The Inadequacy of Existing Regulatory Mechanisms:* The wolf management plans currently in place for Minnesota, Wisconsin, and Michigan will be more than sufficient to retain viable wolf populations in each State, and even for three completely isolated wolf populations. These State plans provide a very high level of assurance that wolf populations in these three States will not decline to nonviable levels in the foreseeable future. While these State plans recognize there may be a need to control or even reduce wolf

populations at some future time, none of the plans include a public harvest of wolves.

Wolves in Minnesota, Wisconsin, and Michigan would continue to receive protection from general human persecution by State laws and regulations. Michigan met the criteria established in their management plan for State delisting and in April 2009 removed gray wolves from the State's threatened and endangered species list and amended the Wildlife Conservation Order to grant "protected animal" status to the gray wolf in the State (Roell 2009, pers. comm.). That status "prohibit[s] take, establish[es] penalties and restitution for violations of the Order, and detail[s] conditions under which lethal depredation control measures could be implemented" (Humphries in litt. 2004). Since 2004 wolves have been listed as a "protected wild animal" by the WI DNR, allowing no lethal take unless special authorization is requested from the WI DNR (Wydeven *et al.* 2009c). Following Federal delisting, Wisconsin will fully implement that "protected wild animal" status for the species, including protections that provide for fines of \$1,000 to \$2,000 for unlawful hunting. Minnesota DNR will consider population management measures, including public hunting and trapping, but this will not occur sooner than 5 years after a Federal delisting and will maintain a wolf population of at least 1600 animals (MN DNR 2001, p. 2). In the meantime, wolves in Zone A could be legally taken in Minnesota only for depredation management or public safety (MN DNR 2001, pp. 3–4). Since the wolf management plan was completed in 2001, MN DNR has fully staffed its conservation officer corps in the State's wolf range (Stark 2009a, pers. comm.).

Additionally, although to our knowledge no Tribes have completed wolf management plans at this time, based on communications with Tribes and Tribal organizations, federally-delisted wolves are very likely to be

adequately protected on Tribal lands. In addition, on the basis of information received from other Federal land management agencies in Minnesota, Wisconsin, and Michigan, we expect National Forests, units of the National Park System, military bases, and National Wildlife Refuges will provide protections to gray wolves after delisting that will match, and in some cases will exceed, the protections provided by State wolf management plans and State protective regulations.

*E. Other Natural or Manmade Factors Affecting Its Continued Existence:* The information contained within the petitions and our files conclude that other natural or manmade factors may not be threats sufficient to cause the wolves in the western Great Lakes area to warrant listing; this includes taking of wolves by Native Americans for religious, spiritual, or traditional cultural purposes, public attitudes toward the gray wolf, and coyote hybridization. If requested by the Tribes, multiribal natural resource agencies, or the States, the Service or other appropriate Federal agencies will work with these parties to help determine if a harvestable surplus exists, and if so, to assist in devising reasonable and appropriate methods and levels of harvest for delisted wolves for traditional cultural purposes. We conclude that the small number of wolves that may be taken by Native Americans will not be a significant threat to the viability of the population.

#### Finding

On the basis of our determination under section 4(b)(3)(A) of the Act, we have determined that the petitions present substantial scientific or commercial information indicating that delisting the gray wolf in Minnesota, Wisconsin, Michigan, or the western Great Lakes area as a whole may be warranted. This finding is based on information provided under all five factors.

Because we have found that the petitions present substantial

information indicating that delisting the gray wolf in Minnesota, Wisconsin, Michigan, or the western Great Lakes area as a whole may be warranted, we are initiating a status review to determine whether delisting the gray wolf in those States and the surrounding region under the Act is warranted.

The "substantial information" standard for a 90-day finding differs from the Act's "best scientific and commercial data" standard that applies to a status review to determine whether a petitioned action is warranted. A 90-day finding does not constitute a status review under the Act. In a 12-month finding, we will determine whether a petitioned action is warranted after we have completed a thorough status review of the species, which is conducted following a substantial 90-day finding. Because the Act's standards for 90-day and 12-month findings are different, as described above, a substantial 90-day finding does not mean that the 12-month finding will result in a warranted finding.

#### References Cited

A complete list of references cited is available on the Internet at <http://www.regulations.gov> and upon request from the Midwest Regional Office (see **FOR FURTHER INFORMATION CONTACT**).

#### Author

The primary authors of this notice are the staff members of the Midwest Regional Office (see **FOR FURTHER INFORMATION CONTACT**).

#### Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: August 19, 2010.

**Wendi Weber,**

*Acting Director, U.S. Fish and Wildlife Service.*

[FR Doc. 2010-22752 Filed 9-13-10; 8:45 am]

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## Part III

## Department of the Interior

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Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Revising the Listing of the Gray Wolf (*Canis lupus*) in the Western Great Lakes; Final rule

## DEPARTMENT OF THE INTERIOR

## Fish and Wildlife Service

## 50 CFR Part 17

[Docket No. FWS-R3-ES-2011-0029;  
FXES11130900000C6-123-FF09E32000]

RIN 1018-AX57

**Endangered and Threatened Wildlife and Plants; Revising the Listing of the Gray Wolf (*Canis lupus*) in the Western Great Lakes**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service or USFWS) are revising the 1978 listing of the Minnesota population of gray wolves (*Canis lupus*) to conform to current statutory and policy requirements. We rename what was previously listed as the Minnesota population of the gray wolf as the Western Great Lakes (WGL) Distinct Population Segment (DPS), and delineate the boundaries of the expanded Minnesota population segment to include all of Minnesota, Wisconsin, and Michigan and portions of the adjacent states. We are removing the WGL DPS from the List of Endangered and Threatened Wildlife. We are taking this action because the best available scientific and commercial information indicates that the WGL DPS does not meet the definitions of threatened or endangered under the Act.

This final rule also removes the designated critical habitat for the wolf in Minnesota and Michigan and the special regulations under section 4(d) of the Act for wolves in Minnesota.

We are separating our determination on the delisting of the Western Great Lakes DPS from the determination on our proposal regarding all or portions of the 29 eastern States we considered to be outside the historical range of the gray wolf. This rule finalizes our determination for the WGL DPS. A subsequent decision will be made for the rest of the eastern United States.

**DATES:** This rule becomes effective on January 27, 2012.

**ADDRESSES:** This final rule is available on the Internet at <http://www.regulations.gov> and at the U.S. Fish and Wildlife Service, Midwest Regional Office, 5600 American Boulevard West, Suite 990, Bloomington, Minnesota 55437. Comments and materials we received, as well as supporting documentation we used in preparing this final rule, are available for public inspection on [http://](http://www.regulations.gov)

[www.regulations.gov](http://www.regulations.gov) at Docket No. FWS-R3-ES-2011-0029, or by appointment, during normal business hours at the following Ecological Services offices:

- Twin Cities, Minnesota Ecological Services Field Office, 4101 American Blvd. E., Bloomington, MN; (612) 725-3548.
- Green Bay, Wisconsin Ecological Services Field Office, 2661 Scott Tower Dr., New Franken, WI; (920) 866-1717.
- East Lansing, Michigan Ecological Services Field Office, 2651 Coolidge Road, Suite 101, East Lansing, MI; (517) 351-2555.

**FOR FURTHER INFORMATION CONTACT:**

Laura Ragan, (612) 713-5350. Direct all questions or requests for additional information to: GRAY WOLF QUESTIONS, U.S. Fish and Wildlife Service, 5600 American Boulevard West, Suite 990, Bloomington, Minnesota 55437. Additional information is also available on our Web site at <http://www.fws.gov/midwest/wolf>. Individuals who are hearing-impaired or speech-impaired may call the Federal Relay Service at 1-(800) 877-8337 for TTY assistance.

**SUPPLEMENTARY INFORMATION:**

**Background**

*Previous Federal Actions for WGL Wolves*

The eastern timber wolf (*Canis lupus lycaon*) was listed as endangered in Minnesota and Michigan in the first list of species that were protected under the 1973 Act, published in May 1974 (USDI 1974). On March 9, 1978, we published a rule (43 FR 9607) reclassifying the gray wolf at the species level (*Canis lupus*) as endangered throughout the conterminous 48 States and Mexico, except for the Minnesota population, which we classified to threatened. The separate subspecies listings, including *C. l. lycaon*, thus were subsumed into the listings for the gray wolf in Minnesota and the gray wolf in the rest of the conterminous United States and Mexico. We considered the Minnesota group of gray wolves to be a listable entity under the Act, and listed it as threatened; we considered the gray wolf group in Mexico and the 48 conterminous States other than Minnesota to be another listable entity, and listed it as endangered (43 FR 9607, 9610, respectively, March 9, 1978). This reclassification was undertaken because of uncertainty about the taxonomic validity of some of the previously listed subspecies and because we recognized that wolf populations were historically

connected, and that subspecies boundaries were thus malleable.

However, the 1978 rule also stated that “biological subspecies would continue to be maintained and dealt with as separate entities” (43 FR 9609), and offered “the firmest assurance that [the Service] will continue to recognize valid biological subspecies for purposes of its research and conservation programs” (43 FR 9610, March 9, 1978). Accordingly, recovery plans were developed for the wolf populations in the following regions of the United States: the northern Rocky Mountains in 1980, revised in 1987; the eastern U.S. in 1978, revised in 1992; and the Southwest in 1982, the revision of which is now under way.

In the 1978 rule, we also identified Isle Royale National Park, Michigan, and Minnesota wolf management zones 1, 2, and 3, as critical habitat. We also promulgated special regulations under section 4(d) of the Act for operating a wolf management program in Minnesota at that time. The depredation control portion of the special regulation was later modified (50 FR 50793; December 12, 1985); these special regulations are found in 50 CFR 17.40(d)(2).

On April 1, 2003, we published a final rule revising the listing status of the gray wolf across most of the conterminous United States (68 FR 15804). Within that rule, we identified three DPSs for the gray wolf, including an Eastern DPS, which was reclassified from endangered to threatened, except where already classified as threatened. In addition, we established a second section 4(d) rule that applied provisions similar to those previously in effect in Minnesota to most of the Eastern DPS. The special rule was codified in 50 CFR 17.40(o).

U.S. District Court rulings in Oregon and Vermont on January 31, 2005, and August 19, 2005, respectively, invalidated the April 1, 2003, final rule. Consequently, the status of gray wolves outside of Minnesota reverted back to endangered status, as had been the case prior to the 2003 reclassification. The courts also invalidated the three DPSs identified in the April 1, 2003, rule, as well as the associated special regulations.

On March 27, 2006, we published a proposal (71 FR 15266-15305) to identify a WGL DPS of the gray wolf, to remove the WGL DPS from the protections of the Act, to remove designated critical habitat for the gray wolf in Minnesota and Michigan, and to remove special regulations for the gray wolf in Minnesota. The proposal was followed by a 90-day comment period,

during which we held four public hearings on the proposal.

On February 8, 2007, the Service issued a rule that identified and delisted the WGL DPS of the gray wolf (*Canis lupus*) (72 FR 6052). Three parties challenged this rule (*Humane Society of the United States v. Kempthorne*, 579 F. Supp. 2d 7 (D.D.C. 2008)), and on September 29, 2008, the court ruled in favor of the plaintiffs and vacated the rule and remanded it to the Service.

On December 11, 2008, we published a notice reinstating protections for the gray wolf in the western Great Lakes (and northern Rocky Mountains) pursuant to court orders (73 FR 75356).

On April 2, 2009, we published a final rule identifying the western Great Lakes populations of gray wolves as a DPS and revising the List of Endangered and Threatened Wildlife by removing the DPS from that list (74 FR 15070). We did not seek additional public comment on the 2009 final rule. On June 15, 2009, five parties filed a complaint against the Department and the Service alleging that we violated the Act, the Administrative Procedure Act (APA), and the court's remand order by publishing the 2009 final rule (74 FR 15070). On July 2, 2009, pursuant to a settlement agreement between the parties, the court issued an order remanding and vacating the 2009 final rule.

On March 1, 2000, we received a petition from Mr. Lawrence Krak of Gilman, Wisconsin, and on June 28, 2000, we received a petition from the Minnesota Conservation Federation. Mr. Krak's petition requested the delisting of gray wolves in Minnesota, Wisconsin, and Michigan. The Minnesota Conservation Federation requested the delisting of gray wolves in a Western Great Lakes DPS. Because the data reviews resulting from the processing of these petitions would be a subset of the review begun by our July 13, 2000, proposal (65 FR 43450) to revise the current listing of the wolf across most of the conterminous United States, we did not initiate separate reviews in response to those two petitions. While we addressed these petitions in our February 8, 2007, final rule (72 FR 6052), this rule was vacated by the subsequent District Court ruling. While we view our actions on these petitions as final upon publication of the **Federal Register** determinations, we nevertheless restate our 90-day findings that the action requested by each of the petitions may be warranted, as well as our 12-month finding that the action requested by each petition is warranted.

On March 15, 2010, we received a petition from the Minnesota Department

of Natural Resources requesting that the gray wolf in Minnesota be removed from the List of Endangered or Threatened Wildlife under the Act. Likewise, on April 26, 2010, we received a petition from the Wisconsin Department of Natural Resources requesting that the gray wolf in Minnesota and Wisconsin be delisted. On April 26, 2010, we received a petition from the Sportsmen's Alliance, representing five other organizations, requesting that gray wolves in the Great Lakes area be delisted. On June 17, 2010, we received a petition from Safari Club International, Safari Club International Foundation, and the National Rifle Association of America requesting that wolves of the western Great Lakes be delisted. In response to those four petitions, on September 14, 2010, we published a 90-day finding determining that the petitions presented substantial information that delisting may be warranted and reinitiated a full status review.

We published a proposal to revise the List of Endangered and Threatened Wildlife for the gray wolf (*Canis lupus*) in the eastern United States and to initiate status reviews for the gray wolf and for the eastern wolf (*Canis lycaon*) on May 5, 2011 (76 FR 26806). On August 26, 2011, we published a notice (76 FR 53379) reopening the public comment period on the May 5, 2011, proposal. We reopened the comment period to allow for additional public review and the inclusion of any new information, specifically concerning North American wolf taxonomy. That notice also informed the public that we were considering issuing separate final rules for our final determinations on the proposed delisting of the Western Great Lakes DPS and the proposed determination regarding all or portions of the 29 States considered to be outside the historical range of the gray wolf. On September 19, 2011, the Service published a notice (76 FR 57943) informing the public that supplementary materials were available. In recognition of intellectual property right laws, the manuscript made available on August 26 provided readers with references to the sources of several copyrighted figures, but did not include the figures themselves. The Service subsequently obtained approval to include all copyrighted figures in the manuscript and on September 7, 2011, uploaded a complete copy of the manuscript to <http://www.regulations.gov>.

#### *Conformance With the Act's Definition of Species*

Given the assurances we provided in the 1978 *Canis lupus* listing that we would continue to treat gray wolf subspecies as separate entities for conservation purposes (as noted in Previous Federal Actions for WGL Wolves, above), we identified a need to reconsider the listing in light of current statutory and policy standards regarding the Act's definition of species. The Act provides for listing at various taxonomic and subtaxonomic levels through its definition of "species" in section 3(16): The term species includes any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature (16 U.S.C. 1532(16)). As a matter of procedure, then, the Service determines whether it is most appropriate to list an entity as a full species, a subspecies, or a DPS of either a species or subspecies. The gray wolf has a Holarctic range; the current listing encompasses the United States-Mexico segment of the range and consists, in turn, of multiple entities.

The specific provision for listing distinct population segments of vertebrates was enacted through the 1978 amendments to the Act (Pub. L. 95-362, November 10, 1978); these amendments replaced the ability to list "populations" with the ability to list "distinct population segments" and treat them as "species" under the Act. To interpret and implement the 1978 DPS amendment, the Service and the National Marine Fisheries Service jointly published the Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act (DPS policy) (61 FR 4722, February 7, 1996), setting policy standards for designating populations as "distinct."

The March 1978 gray wolf listing predated the November 1978 amendments to the Act. Although the 1978 rule lists two *C. lupus* entities, *i.e.*, the endangered and threatened entities described above, these listings were not predicated upon a formal DPS analysis and do not comport with current policy standards. Nonetheless, subsequent recovery plans and all gray wolf rulemakings since 1996 have focused on units reflective of the evident intent of the 1978 rule to manage and recover the different gray wolf groups covered by the 1978 listings as "separate entities" (43 FR 9609), *i.e.*, subspecies or populations. This rule revises the 1978 threatened listing to bring that listing in line, insofar as possible, with the Act's

requirements and current policy standards.

#### *Wolf Taxonomy in the Western Great Lakes Region*

The taxonomic status of the wolves in the western Great Lakes region has long been debated. They have been considered a subspecies of gray wolf, *Canis lupus lycaon* (Goldman 1944; Hall and Kelson 1959); a second subspecies of gray wolves, *Canis lupus nubilus* (Nowak 1995, 2002, 2003); a *Canis lupus* population that has been influenced by interbreeding with coyotes (Lehman *et al.* 1991, Koblmüller *et al.* 2009; vonHoldt *et al.* 2011); members of a full species *Canis lycaon* (or eastern wolf) that is considered separate from *Canis lupus* (Wilson *et al.* 2000; Baker *et al.* 2003); possibly the same species as the red wolf, *C. rufus* (Wilson *et al.* 2000); the result of hybridization between *C. rufus* and *C. lupus* (Nowak 2002, 2003, 2009); and as a mixed population of *C. lupus*, *C. lycaon*, and their intercrosses (hybrids) (Wheeldon and White 2009; Fain *et al.* 2010; Wheeldon *et al.* 2010). These varying interpretations of the taxonomic status of western Great Lakes wolves are summarized, respectively, below.

Wolves in Michigan, Wisconsin, and eastern Minnesota were considered by Goldman (1944, p. 437 and Figure 14) to be within the range of the subspecies *Canis lupus lycaon*. Goldman based his classification on variation in body size and proportions, and in pelage (coat) color. According to Goldman, this was the subspecies of gray wolf historically found across a wide range east of the Mississippi River in the United States and in southeastern Canada. Wolves immediately to the west of the Mississippi River were considered to be part of the subspecies *Canis lupus nubilus*. This taxonomic interpretation was followed by Hall and Kelson (1959, p. 849) and Hall (1981, p. 932).

Based on a study of DNA variation in North American wolves, Wilson *et al.* (2000, p. 2165) proposed that the taxonomic standing of eastern wolves be elevated to full species as *Canis lycaon*. They found that eastern wolves were divergent from *Canis lupus* in both mitochondrial DNA (mtDNA) and autosomal microsatellite DNA composition. They considered the geographic range of *C. lycaon* as extending west across the Great Lakes region to Minnesota and Manitoba.

Nowak's (2002, p. 119; 2003, p. 243) revision of the subspecies taxonomy reduced the range of *C. l. lycaon* to southern Ontario and Quebec and northern portions of New York, Pennsylvania, and Ohio. Nowak's

classification was primarily based on statistical analysis of measurements of skull features. He considered gray wolves that historically occupied Michigan, Wisconsin, and Minnesota to be within the range of *C. l. nubilus*. Based on analysis of additional specimens, Nowak (2002, p. 119; 2003; 2009, p. 238) continued to recognize western Great Lakes wolves as *C. l. nubilus*, but noted that historical specimens from the Upper Peninsula (UP) of Michigan were somewhat transitional between the two subspecies.

Leonard and Wayne (2008, pp. 2–3) have reported on maternally inherited mtDNA sequence haplotypes (DNA sequences or groups of alleles of different genes on a single chromosome that are inherited together as a single unit) from historical (“prerecovery”) wolves from Ontario, Quebec, Michigan, and Wisconsin compared with the recent population of the area. Their interpretation of these results is that the 6 unique haplotypes identified in 15 historical individuals indicate that the pre-recovery population was “an endemic American wolf,” which they call “the Great Lakes wolf” (p. 1). However, only the two haplotypes most common in the historical sample still occur in the modern wolf population of the western Great Lakes area. Leonard and Wayne (2008) conclude that the modern population does not contain the diversity of Great Lakes wolf haplotypes found in the prerecovery population and that the current population is primarily a mixture of *Canis lupus* and coyote hybrids, with minor influence from the endemic Great Lakes wolf (p. 3).

Koblmüller *et al.* (2009) examined wolves from the Great Lakes region (they do not separate between the western and eastern Great Lakes) using three types of genetic markers: mtDNA; Y-chromosome haplotypes based on microsatellite DNA loci on the Y-chromosome, which is a paternally inherited marker; and autosomal microsatellite DNA, which provides information on recent and ongoing interactions among populations rather than evolutionary lineage information. The historical sample from Minnesota was found to exhibit a third Great Lakes wolf mtDNA haplotype that is common in the modern population. However, the Y-chromosome haplotypes identified in the historical sample were more similar to those of western gray wolves, suggesting that interbreeding between Great Lakes wolves and western gray wolves had taken place before 1910, the year of collection.

Koblmüller *et al.* (2009) conclude that, despite what they consider to be

both ancient and recent incidences of interbreeding with coyotes and western gray wolves, Great Lakes wolves remain morphologically distinct and represent a “distinct taxon” of gray wolf (*Canis lupus*) that is adapted to the region. They do not, however, conclude that this taxon is differentiated enough to be recognized as a species separate from gray wolves, as proposed by Wilson *et al.* (2000).

Several recent studies conclude that the eastern wolf is a unique species and should be recognized as *C. lycaon* (Wheeldon and White 2009; Wilson *et al.* 2009; Fain *et al.* 2010, p. 15; Wheeldon *et al.* 2010). Wheeldon and White (2009, pp. 3–4) state that both the present-day and pre-recovery wolf populations in the western Great Lakes region are genetically similar and that both were derived from hybridization between *C. lupus* and the eastern wolf, *C. lycaon*. Fain *et al.* (2010, p. 10) recognize *C. lycaon* as a unique species of North American wolf, and based on mtDNA and Y-chromosome haplotypes and autosomal microsatellite markers, they establish that the population of wolves in the western Great Lakes region comprise *C. lupus*, *C. lycaon*, and their hybrids. Contrary to Koblmüller *et al.* (2009), Fain *et al.* (2010, p. 14) found no evidence of interbreeding with coyotes. Furthermore, they conclude that the western Great Lakes States were included in the historical range of *C. lycaon* and that hybridization between the two species “predates significant human intervention” (Fain *et al.* 2010, pp. 13–14).

Wheeldon *et al.* (2010, p. 2) used multiple genetic markers in an attempt to clarify the taxonomic status of *Canis* species in the western Great Lakes region of Minnesota, Wisconsin, Michigan, and western Ontario. They conclude that the current western Great Lakes wolf population is “composed of gray-eastern wolf hybrids that probably resulted from historic hybridization between the parental species” (Wheeldon *et al.* 2010, p. 10), and that the appropriate taxonomic designation for the western Great Lakes hybrid wolves is *C. lupus* × *lycaon*.

Recently, vonHoldt *et al.* (2011) examined single nucleotide polymorphisms (SNPs) to investigate the genetic distinctiveness of North American canids. They conclude that wolves from the Great Lakes region are the product of low-level hybridization between coyotes and *C. lupus* that likely occurred prior to the recent invasion of coyotes into the area and found no evidence that *C. lycaon* exists as a distinct species (vonHoldt *et al.* 2011, pp. 8–9). They further find that Great

Lakes wolves are genetically distinct from other North American gray wolves and coyotes, but to what degree remains controversial (vonHoldt *et al.* 2011, p. 8). This study represents a new system for genetic testing using the whole genome of organisms. This new genetic testing system using SNPs promises to open new opportunities for studying the ancestry and relatedness of canid populations.

Chambers *et al.* (2011, in prep.) conducted a review of the available scientific literature to assess the taxonomic standing of wolves in North America. They conclude the most supportable interpretation is that the eastern wolf is not a subspecies (*C. lupus lycaon*), but a full species (*C. lycaon*). This is based on the available mtDNA and Y-chromosome haplotype data (pp. 91–95). The Service believes the Chambers *et al.* (in prep.) manuscript (that includes the information on which we at least partially based our proposal) is an important synthesis of the available data that advances and focuses the debate regarding canid taxonomy in North America. The authors themselves acknowledge, nevertheless, that further research may change some of their conclusions (p. 128).

Wolf taxonomic classification is a fast-changing field in which research capabilities have greatly expanded in recent years. It is clear from the studies discussed above that the taxonomic classification of wolves in the western Great Lakes region is one that has been, and will continue to be, debated in the scientific community. Most researchers, however, agree that there is a unique and genetically identifiable form of wolf that occupies the western Great Lakes region. Researchers differ in whether this unique form of wolf should be recognized as a species, a subspecies, or a distinct taxon or ecotype. The taxonomic identity of eastern wolves has been controversial since Wilson *et al.* (2000) first claimed that eastern wolves are a separate species (*Canis lycaon*) from the western wolf (*Canis lupus*). In our May 5, 2011, proposed rule (76 FR 26806), we proposed to resolve the ongoing controversy over the classification of wolves in the western Great Lakes region by accepting what we considered at the time to be the best scientific interpretation of the available data and information. The scientific community then had the opportunity to review our analysis and respond to it through the public and peer review processes. Comments on the proposed rule, including comments provided by leading researchers in the field of canid biology and genetics, have led us to

reconsider our proposed interpretation. While Chambers *et al.* (in prep.) provide a scientific basis for arguing the existence of eastern wolves as a distinct species, this represents neither a scientific consensus nor the majority opinion of researchers on the taxonomy of wolves, as others continue to argue that eastern wolves are forms of gray wolves (Kobl Müller *et al.* 2009, vonHoldt *et al.* 2011). In light of the ongoing scientific debate, and the lack of clear resolution concerning the taxonomy of wolves in the western Great Lakes, we are at this time continuing to recognize *C. lupus* as the only species that occurs in the WGL. The wolves that occupy the WGL DPS have long been accepted as gray wolves, *C. lupus*, and until greater scientific consensus is reached regarding whether to revise this taxonomic classification, the better conclusion is to continue to recognize them as gray wolves.

#### *Wolf-Coyote Relationships*

For a discussion on interpretations of wolf-coyote relationships in the western Great Lakes, see the discussion under Factor E. Other Natural or Manmade Factors Affecting Its Continued Existence in this final rule.

#### **Biology and Ecology of Wolves in the Western Great Lakes**

For a discussion of the biology and ecology of wolves in the WGL, see the proposed WGL wolf rule published on May 5, 2011 (76 FR 26806–26145).

#### **Distinct Vertebrate Population Segment Policy Overview**

Pursuant to the Act, we consider whether the best scientific and commercial data available are sufficient to indicate that listing, reclassifying, or delisting any species, subspecies, or, for vertebrates, any DPS of these taxa may be warranted. To interpret and implement the DPS provision of the Act and congressional guidance, the Service and the National Marine Fisheries Service (NMFS) published a policy regarding the identification of distinct vertebrate population segments under the Act (Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 FR 4722, February 7, 1996) (hereafter DPS Policy). Under the DPS policy, two factors are considered in a decision regarding the potential identification of a DPS: (1) Discreteness of the population segment in relation to the remainder of the taxon, and (2) the significance of the population segment to the taxon to which it belongs. If a population meets both tests, it can be

identified as a DPS. Then a third factor, the DPS's conservation status, is evaluated in relation to the Act's standards for listing, delisting, or reclassification, meaning that we undertake an analysis to determine whether the DPS is endangered or threatened or does not meet the criteria for listing. All three steps are necessary components of a complete DPS analysis.

#### **Past Practice and History of Using DPSs**

As of December 8, 2011, of the 388 native vertebrate listings, 80 are listed as less than an entire taxonomic species or subspecies (henceforth referred to in this discussion as populations) under one of several authorities, including the “distinct population segment” language in the Act's definition of species (section 3(16)). Thirty-three of these 80 populations, which span 49 different taxa, predate the 1996 DPS Policy; as such, the final listing determinations for these populations did not include formal policy-based analyses or expressly designate the listed entity as a DPS. In several instances, however, the Service and National Marine Fisheries Service (NMFS) have established a DPS and revised the List of Endangered and Threatened Wildlife in a single action, as shown in the following examples.

In February 1985, the Service delisted the brown pelican (*Pelecanus occidentalis*) in the southeastern United States and continued to identify it as endangered throughout the remainder of its range (50 FR 4938). In June 1994, NMFS revised the entry for the gray whale (*Eschrichtius robustus*) to remove the eastern North Pacific population from the List while retaining the western North Pacific population as endangered (59 FR 31094). In July 2003, the Service established two DPSs of the Columbian white-tailed deer (*Odocoileus virginianus leucurus*)—the Douglas County DPS and the Columbia River DPS—and delisted only the Douglas County DPS, while retaining listed status for the Columbia River DPS (68 FR 43647). In March 2007, the Service established a DPS of the grizzly bear (*Ursus arctos horribilis*) for the Greater Yellowstone Area and surrounding area within the existing grizzly bear listing in the lower 48 States, and delisted this DPS (72 FR 14865). This decision was later vacated by the court; however, not on the grounds of the DPS. Also in March 2007, the Service identified the American crocodile (*Crocodylus acutus*) in Florida as a DPS within the existing endangered listing of the American crocodile and reclassified the Florida DPS from endangered to threatened (71



FR 13027). Revising and delisting the WGL DPS of wolves is consistent with the Service's past practice and does not represent a change in agency position.

On February 8, 2007, the Service issued a rule that identified and delisted the WGL DPS of the gray wolf (*Canis lupus*) (72 FR 6052). Three parties challenged this rule (*Humane Society of the United States v. Kempthorne*, 579 F. Supp. 2d 7 (D.D.C. 2008)), and on September 29, 2008, the court ruled in favor of the plaintiffs and vacated the rule and remanded it to the Service. On remand, the Service was directed to provide an explanation as to how simultaneously identifying and delisting a DPS is consistent with the Act's text, structure, policy objectives, legislative history, and any relevant judicial interpretations. The court's primary question was whether the Service has the authority to identify a DPS within a larger already-listed entity and, in the same decision, determine the DPS does not warrant the Act's protections even though the other populations of the species retain the original listing status.

Our authority to make these determinations and to revise the list accordingly is a reasonable interpretation of the language of the Act, and our ability to do so is an important component of the Service's program for the conservation of threatened and endangered species. Our authority to revise the existing listing of a species (the gray wolf in Minnesota and the gray wolf in the lower 48 States and Mexico, excluding Minnesota) to identify a Western Great Lakes DPS and determine that it is healthy enough that it no longer needs the Act's protections is found in the precise language of the Act. Moreover, even if that authority were not clear, our interpretation of this authority to make determinations under section 4(a)(1) and to revise the endangered and threatened species list to reflect those determinations under section 4(c)(1) is reasonable and fully consistent with the Act's text, structure, legislative history, relevant judicial interpretations, and policy objectives.

We consulted with the Solicitor of the Department of the Interior to address the issue in the court's opinion. On December 12, 2008, a formal opinion was issued by the Solicitor, "U.S. Fish

and Wildlife Service Authority Under Section 4(c)(1) of the Endangered Species Act to Revise Lists of Endangered and Threatened Species to 'Reflect Recent Determinations'" (U.S. DOI 2008). The Service fully agrees with the analysis and conclusions set out in the Solicitor's opinion. This final action is consistent with the opinion. The complete text of the Solicitor's opinion can be found at <http://www.fws.gov/midwest/wolf/>.

#### **Western Great Lakes Distinct Population Segment**

In 1978, based on what was at that time the best available biological data, the Service stated that there were two "species" of gray wolves in the coterminous United States: "For purposes of this rulemaking, the gray wolf (*Canis lupus*) group in Mexico and the 48 conterminous States of the United States, other than Minnesota, is being considered as one 'species,' and the gray wolf group in Minnesota is being considered as another 'species.'" (43 FR 9607, 9610, March 9, 1978). The Service then assigned a different status under the Act to each of those two "species," finding the Minnesota gray wolf 'species' to be threatened, while the other gray wolf "species" (the 48 conterminous States, except Minnesota, and in Mexico) to be endangered. The 1978 rule referred to the Minnesota listing as the listing of a "species" when, clearly, based on the information available at that time, the Minnesota wolves did not taxonomically constitute a separate species of wolf. However, ever since the amendment to the Act later in 1978 that revised the definition of "species" to include distinct population segments of vertebrate fish or wildlife, the 1978 Minnesota gray wolf listing has functioned effectively as a DPS.

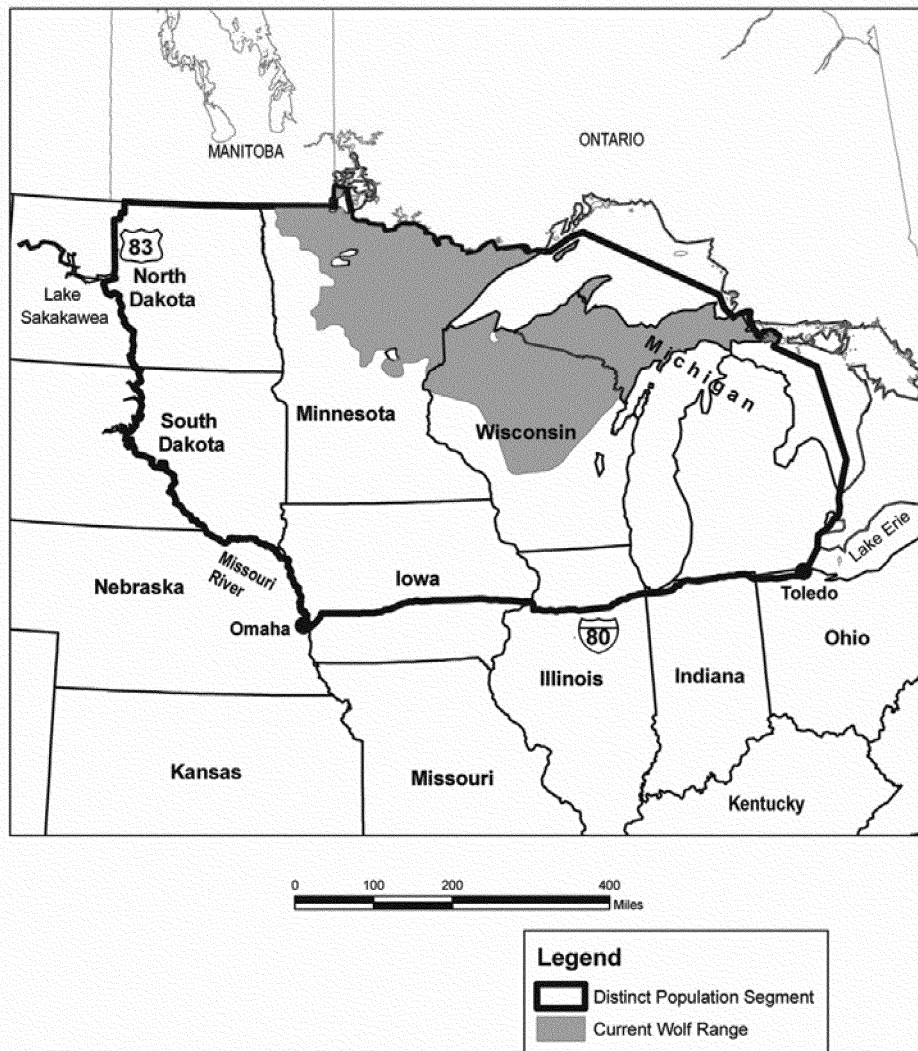
The DPS Policy (61 FR 4725, February 7, 1996) expressly provides for reexamining pre-policy DPS listings: "Any DPS of a vertebrate taxon that was listed prior to implementation of this policy will be reevaluated on a case-by-case basis as recommendations are made to change the listing status for that distinct population segment. The appropriate application of the policy will also be considered in the 5-year

reviews of the status of listed species required by section 4(c)(2) of the Act." Based on this provision, we are, within this rule, (1) recognizing that the 1978 Minnesota listing has functioned effectively as a DPS, (2) reevaluating that listing by applying the same reevaluation process to this and other de facto DPSs that we apply to formally established DPSs, and (3) revising that de facto DPS listing to meet the criteria in the DPS policy and to reflect the best available biological data.

A gray wolf DPS including only Minnesota would not meet the criteria in the DPS policy because it would not be discrete "in relation to the remainder of the species to which it belongs" (61 FR 4725, February 7, 1996). The Minnesota wolf population has expanded well beyond State boundaries and is connected to the wolf population in Wisconsin and Michigan, as evidenced by frequent movements of wolves among the States (Van Deelen 2009, p. 140; Treves *et al.* 2009, pp. 192–195) and genetic analyses that demonstrate the Wisconsin and Michigan wolves are mostly of the same genetic makeup as Minnesota wolves (Wheeldon and White 2009, p. 4; Fain *et al.* 2010). Therefore, we are revising the boundaries of the Minnesota DPS to meet the criteria in the DPS policy and to reflect the current geographic location of the population as discussed under the *Distinct Population Segment Analysis*, below.

#### *Geographical Area of the Western Great Lakes DPS*

The geographical area of the WGL DPS is shown in figure 1, below, and is described as all of Minnesota, Wisconsin, and Michigan; the portion of North Dakota north and east of the Missouri River upstream to Lake Sakakawea and east of the centerline of Highway 83 from Lake Sakakawea to the Canadian border; the portion of South Dakota north and east of the Missouri River; the portions of Iowa, Illinois, and Indiana north of the centerline of Interstate Highway 80; and the portion of Ohio north of the centerline of Interstate Highway 80 and west of the Maumee River at Toledo.

**Figure 1. Western Great Lakes Distinct Population Segment**

#### *Distinct Population Segment Analysis* Analysis for Discreteness

Under the 1996 DPS Policy (61 FR 4722), a population segment of a vertebrate taxon may be considered discrete if it satisfies either of the following conditions: (1) It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors (quantitative measures of genetic or morphological discontinuity may provide evidence of this separation); or (2) it is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act.

*Markedly Separated from Other Populations of the Same Taxon*—The western boundaries of the WGL DPS are approximately 400 mi (644 km) from the nearest known gray wolf packs in Wyoming and Montana. The distance between those western packs and the nearest packs within the WGL DPS is nearly 600 mi (966 km). The area between Minnesota packs and northern Rocky Mountains (NRM) packs largely consists of unsuitable habitat, with only scattered islands of possibly suitable habitat, such as the Black Hills of eastern Wyoming and western South Dakota. There are no known populations of gray wolves to the south or east of the WGL DPS within the United States.

As discussed in the previous section, wolves are known to disperse over vast

distances, but straight-line documented dispersals of 400 mi (644 km) or more are very rare. Only three records exist of tagged wolves dispersing from within the core of the WGL DPS that were known to travel a straight-line distance over 400 mi (644 km) (Treves *et al.* 2009). Although we cannot rule out the possibility of a WGL wolf traveling 600 mi (966 km) or more and joining or establishing a pack in the northern Rockies, such a movement has not been documented and is expected to happen very infrequently, if at all. Similar movements from the NRM wolf population into the WGL DPS are unknown and are expected to happen infrequently. The 2006 Sturgis (South Dakota) wolf is the closest that an NRM wolf has come to entering the WGL DPS (Fain in litt. 2006); however, the Sturgis

wolf would still have had to travel over 300 mi (500 km) before encountering the nearest wolf pack in the WGL DPS. As the discreteness criterion requires that the DPS be “markedly separated” from other populations of the taxon rather than requiring complete isolation, this high degree of physical separation between the WGL DPS and the northern Rocky Mountains satisfies the discreteness criterion.

**Delimited by International Boundaries With Significant Management Differences**—The DPS policy allows us to use international borders to delineate the boundaries of a DPS if there are differences in control of exploitation, conservation status, or regulatory mechanisms between the countries. The border between the United States and Canada has been used as the northern boundary of the listed entity since gray wolves were reclassified in the lower 48 States and Mexico in 1978. There remain significant cross-border differences in exploitation, management, conservation status, and regulatory mechanisms. About 52,000 to 60,000 wolves occur in Canada, where suitable habitat is abundant (Boitani 2003, p. 322). Because of this abundance, wolves in Canada are not protected by Federal laws and are only minimally protected in most Canadian provinces (Pletscher *et al.* 1991, p. 546). In the United States, unlike Canada, Federal protection and intensive management has been necessary to recover the wolf (Carbyn 1983).

In general, Canadian gray wolf populations are sufficiently large and healthy so that population regulation, rather than protection and close monitoring, is the management focus. There are an estimated 4,000 wolves in Manitoba (Manitoba Conservation undated). Hunting is allowed nearly province-wide, including in those provincial hunting zones adjoining northwestern Minnesota, with this year's season running from August 31, 2011, through March 31, 2012 (Manitoba Conservation 20011a). Trapping wolves is allowed province-wide, except in and immediately around Riding Mountain National Park (southwestern Manitoba), with this year's season running from September 1, 2011 through August 31, 2012 or October 14, 2011 through March 31, 2012 (varies with trapping zone) (Manitoba Conservation 20011b).

The Ontario Ministry of Natural Resources estimates there are 8,850 wolves in the province, based on prey composition and abundance, topography, and climate, and wolf numbers in most parts of the province are believed to be stable or increasing

since about 1993 (Ontario MNR 2005a, pp. 7–9). In 2005, Ontario limited hunting and trapping of wolves by closing the season from April 1 through September 14 in central and northern Ontario (Ontario MNR 2005b). In the portion of Ontario that is adjacent to the WGL DPS, wolf hunting and trapping is permitted year round (Ontario MNR 2005c). If delisted, Minnesota, Wisconsin, and Michigan would carefully monitor and manage wolves to retain populations at or above the recovery goal (see Factor D). Therefore, even though biologically the WGL wolf population is simply a well-connected southern extension of wolves in Canada, we will continue to use the United States–Canada border to mark the northern boundary of the DPS due to the difference in control of exploitation, conservation status, and regulatory mechanisms between the two countries.

**Conclusion**—Based on our analysis of the best available scientific information, the WGL DPS is markedly separated from other U.S. populations of gray wolves and difference in control of exploitation, conservation status, and regulatory mechanisms justifies discreteness between U.S. and Canadian wolf populations. Therefore, the WGL DPS meets the criterion for discreteness under the DPS policy.

#### Analysis for Significance

If we determine that a population segment is discrete, we next consider available scientific evidence of its significance to the taxon to which it belongs. Our DPS policy states that this consideration may include, but is not limited to, the following: (1) Persistence of the discrete population segment in an ecological setting unusual or unique for the taxon; (2) evidence that loss of the discrete population segment would result in a significant gap in the range of the taxon; (3) evidence that the discrete population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range; and/or (4) evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics. Factor 2 applies to the WGL DPS and is included in our analysis for significance. Factors 1, 3, and 4 do not apply to the WGL DPS and thus are not included in our analysis for significance.

**Significant Gap in the Range of the Taxon**—Gray wolves once lived throughout most of North America. Gray wolves have been extirpated from most of the southern portions of their historical North American range. The

successful restoration of a viable gray wolf metapopulation (a regional group of connected populations of a species) to large parts of Minnesota, Wisconsin, and Michigan has filled a significant gap in the holarctic range of gray wolves in the United States, and it provides an important extension of the range of gray wolves in North America. The loss of the WGL gray wolf population would, therefore, represent a significant gap in the species' holarctic range in that the WGL wolf population is the only gray wolf population in the conterminous States east of the Rocky Mountains and currently holds about 70 percent of North American gray wolves known to occur south of Canada.

**Conclusion**—Based on our analysis of the best available scientific information, the WGL DPS is significant to the taxon to which it belongs because its loss would result in a significant gap in the range of the taxon. Therefore, the WGL DPS meets the criterion for significance under the DPS policy.

#### Discrete Vertebrate Population Segment Conclusion

Based on our review of the best available scientific data, we determine that the WGL DPS is discrete from other gray wolf populations as a result of physical separation from other gray wolf populations in the United States and the international border with Canada. The DPS is significant to the taxon to which it belongs because it contains a wolf metapopulation that fills a large gap in the historical range of the taxon in the conterminous States. Therefore, we have determined that this population segment of wolves satisfies the discreteness and significance criteria required for a DPS. The evaluation of the appropriate conservation status for the WGL DPS is found below.

#### *Delineating the Boundaries of the WGL Gray Wolf DPS*

In contrast to a species or a subspecies, a DPS is a biological population that is delineated by a boundary that is based on something other than established taxonomic distinctions. Therefore, the starting point for delineating a DPS is the biological population or metapopulation, and a geographical delineation of the DPS must reasonably represent the population or metapopulation and its biological characteristics and recovery needs.

To delineate the boundary of the WGL DPS, we considered the current distribution of wolves in the Midwest and the characteristic movements of those wolves and of wolves elsewhere. We examined the best available

scientific data on long-distance movements, including long-distance movements followed by return movements to the vicinity of the natal pack. We concluded that wolf behavior and the nature of wolf populations require that we include within the area of the DPS some subset of known long-distance movement locations. However, as explained below, wolf biology and common sense argue against including all known or potential long-distance movements within the DPS's boundaries.

The analysis detailed below resulted in the boundaries of the WGL DPS that are shown in figure 1. This DPS has been delineated to include the core recovered wolf metapopulation plus a wolf movement zone around the core wolf metapopulation. This geographic delineation is not intended to include all areas to which wolves have moved from the Great Lakes population. Rather, it includes the area currently occupied by wolf packs in Minnesota, Wisconsin, and Michigan; the nearby areas in these States in which wolf packs may become established in the foreseeable future; and a surrounding area into which Minnesota, Wisconsin, and Michigan wolves occasionally move but where persistent packs are not expected to be established because suitable habitat is rare and exists only as small patches. The area surrounding the core wolf populations includes the locations of most known dispersers from the core populations, especially the shorter and medium-distance movements from which wolves are most likely to return to the core areas and contribute to the wolf population. Therefore, the DPS encompasses the current range of the population, which is considered to be viable, including the primary range and the peripheral range.

The WGL areas that are regularly occupied by wolf packs are well documented in Minnesota (Erb and Benson 2004, p. 12, fig. 3; Erb and Don Carlos 2009, pp. 57–60), Wisconsin (Wydeven *et al.* 2006, p. 33, fig. 1; Wydeven *et al.* 2009c, pp. 93–98), and the UP of Michigan (Huntzinger *et al.* 2005, pp. 25–27, figs. 4–6; Beyer *et al.* 2009, pp. 73–75). Wolves have successfully colonized most, perhaps all, suitable habitat in Minnesota. Minnesota data from the winter of 2007–08 indicate that wolf numbers and density have stabilized since 1997–98, and there was no expansion of occupied range in the State (Erb 2008, pp. 5–7). Wisconsin wolves now occupy most habitat areas believed to have a high probability of wolf occurrence except for some areas of northeastern Wisconsin, and the State's wolf

population continues to annually increase in numbers and, to a lesser degree, in area (Wydeven and Wiedenhoef 2009, p. 2). The UP of Michigan has wolf packs throughout the peninsula. In the last 22 years, the wolf population in the UP has grown every year except 1997 and 2010 (Roell 2010, pers. comm.). Over the past 5 years, the average annual growth has been about 7 percent. While the population trend continues to increase, the rate of increase has slowed, consistent with any population expanding into and then filling available habitat. The population may continue to grow or remain steady; however, a small or even negative growth rate may occur any year and should be considered a natural fluctuation seen in any wildlife population.

When delineating the WGL DPS, we had to consider the high degree of mobility shown by wolves. The dispersal of wolves from their natal packs and territories is a normal and important behavioral attribute of the species that facilitates the formation of new packs, the occupancy of vacant territories, and the expansion of occupied range by the “colonization” of vacant habitat. Data on wolf dispersal rates from numerous North American studies (summarized in Fuller *et al.* 2003, p. 179, Table. 6.6; Boyd and Pletscher 1999, p. 1102, Table 6) show dispersal rates of 13 to 48 percent of the individuals in a pack. Sometimes the movements are temporary, and the wolf returns to a location in or near its natal territory. In some cases, a wolf may continue its movement for scores or even hundreds of miles until it locates suitable habitat, where it may establish a territory or join an existing pack. In other cases, a wolf is found dead at a distance from its original territory, leaving unanswered the questions of how far it would have gone and whether it eventually would have returned to its natal area or population.

**Minnesota**—The current record for a documented movement by a wolf in North America is held by a Minnesota wolf that moved a minimum (that is, the straight-line distance from known starting point to most distant point) of at least 550 mi (886 km) northwest into Saskatchewan (Fritts 1983, pp. 166–167). Nineteen other primarily Minnesota movements summarized by Mech (in litt. 2005) averaged 154 mi (248 km). Their minimum distance of travel ranged from 32 to 532 mi (53–886 km) with the minimum dispersal distance shown by known returning wolves ranging from 54 mi (90 km) to 307 mi (494 km).

**Wisconsin**—In 2004, a wolf tagged in Michigan was killed by a vehicle in Rusk County in northwestern Wisconsin, 295 mi (475 km) west of his original capture location in the eastern UP (Wydeven *et al.* 2005b, p. 4). A north-central Wisconsin yearling female wolf traveled a similar distance (298 mi, 480 km) to the Rainy Lake region of Ontario during 1988–89 (Wydeven *et al.* 1995, p. 149).

**Michigan**—Drummer *et al.* (2002, pp. 14–15) reported 10 long-distance dispersal events involving UP wolves. One of these wolves moved to north-central Missouri and another to southeastern Wisconsin, both beyond the core wolf areas in the WGL. The average straight-line distance traveled by those two wolves was 377 mi (608 km), while the average straight-line distance for all 10 of these wolves was 232 mi (373 km). Their straight-line distances ranged from 41 to 468 mi (66 to 753 km).

**Illinois and Indiana**—In December 2002, a Marshall County (Illinois) wolf likely dispersed from the Wisconsin wolf population, nearly 200 mi (322 km) to the north (Great Lakes Directory 2003). The Randolph County (Indiana) wolf had traveled a minimum distance of at least 428 mi (689 km) to get around Lake Michigan from its central Wisconsin birthplace; it likely traveled much farther than that unless it went through the city or suburbs of Chicago (Wydeven *et al.* 2004, pp. 10–11; Treves *et al.* 2009, p. 194). The Pike County (Illinois) wolf that was shot in late 2005 was about 300 mi (180 km) from the nearest wolf packs in central Wisconsin.

**North Dakota, South Dakota, and Nebraska**—Licht and Fritts (1994, p. 77) tabulated seven wolves found dead in North Dakota and South Dakota from 1981 through 1992 that are believed to have originated from Minnesota, based on skull morphometrics. Although none of these wolves were marked or radio-tracked, making it impossible to determine the point of initiation of their journey, a minimum travel distance for the seven can be determined from the nearest wolf breeding range in Minnesota. For the seven, the average distance to the nearest wolf breeding range was 160 mi (257 km) and ranged from 29 to 329 mi (46 to 530 km). One of these seven wolves moved west of the Missouri River before it died.

Genetic analysis of a wolf killed in Harding County, in extreme northwestern South Dakota, in 2001 indicated that it originated from the Minnesota-Wisconsin-Michigan wolf populations (Fain in litt. 2006). The straight-line travel distance to the

nearest Minnesota wolf pack is nearly 400 mi (644 km).

The wolf from the Greater Yellowstone area that was killed by a vehicle on Interstate 90 near Sturgis, South Dakota, in March of 2006 traveled a minimum straight-line distance of about 270 mi (435 km) from the nearest known Greater Yellowstone pack before it died (USFWS *et al.* 2006, in USFWS Program Report, Figure 1).

A large canid was shot by a Boyd County (Nebraska) rancher in late 1994 or early 1995, likely after crossing the frozen Missouri River from South Dakota (Anschutz in litt. 2006, Jobman in litt. 1995). It was determined to be a wolf that originated from the Great Lakes wolf populations (Fain in litt. 2006), whose nearest pack would have been about 300 mi (480 km) away. A wolf illegally killed near Spalding, Nebraska, in December of 2002 also originated from the Minnesota-Wisconsin-Michigan wolf population, as determined by genetic analysis (Anschutz in litt. 2003, Fain in litt. 2006). The nearest Minnesota wolf pack is nearly 350 mi (563 km) from this location.

**Other notable extra-territorial movements**—The extra-territorial movements of several wolves were radio-tracked in sufficient detail to provide insight into their actual travel routes and total travel distances for each trek, rather than only documenting straight-line distance from beginning to end-point. Merrill and Mech (2000, pp. 429–431) reported on four such Minnesota wolves with documented travel distances ranging from 305 to 2,640 mi (490 to 4,251 km) and an average travel route length of 988 mi (1,590 km). Wydeven (1994, pp. 20–22) described a Wisconsin wolf that moved from northwestern Wisconsin to the northern suburbs of St. Paul, Minnesota, for 2 weeks (apparently not seen or reported to authorities by the local residents), then moved back to north-central Wisconsin. The total travel distance was 278 mi (447 km) from her natal pack into Minnesota and on to the north-central Wisconsin location where she settled down.

While investigating the origins of Scandinavian wolf populations, Linnell *et al.* (2005, p. 387) compiled wolf dispersal data from 21 published studies, including many cited separately here. Twenty-two of 298 compiled dispersals (7.4 percent) were more than 300 km (186 mi). Eleven dispersals (3.7 percent) were more than 500 km (311 mi). Because of the likelihood that many long-distance dispersers are never reported, they conclude that the proportion of long-distance dispersers is

probably severely underestimated. Perhaps the longest documented wolf movement is that of a Scandinavian wolf that covered more than 678 miles (1,092 km) (Wabakken *et al.* 2007).

From these extra-territorial movement records, we conclude that wolf movements of more than 200 mi (320 km) straight-line distance have been documented on numerous occasions, while shorter distance movements are more frequent. Movements of 300 mi (480 km) straight-line distance or more are less common, but include one Minnesota wolf that journeyed a straight-line distance of 300 mi (480 km) and a known minimum-travel distance of 2,640 mi (4,251 km) before it reversed direction, as determined by its satellite-tracked collar. This wolf ultimately returned to a spot only 24 mi (40 km) from its natal territory (Merrill and Mech 2000, p. 430). Although much longer movements have been documented, including some by midwestern wolves, return movements to the vicinity of natal territories have not been documented for extra-territorial movements beyond 300 mi (480 km).

Based on these extra-territorial movement data, we conclude that affiliation with the midwestern wolf population is diminished and essentially lost when dispersal takes a Midwest wolf a distance of 250 to 300 mi (400 to 480 km) beyond the outer edge of the areas that are continuously occupied by wolf packs. Although some WGL wolves will move beyond this distance, available data indicate that longer distance dispersers are unlikely to return to their natal population. Therefore, they have lost their functional connection with, and potential conservation value to, the WGL wolf population.

Wolves moving substantial distances outward from the core areas of Minnesota, Wisconsin, and Michigan will encounter landscape features that are at least partial barriers to further wolf movement and that may, if crossed, impede attempts of wolves to return toward the WGL core areas. If such partial barriers are in a location that has separate utility in delineating the biological extent of a wolf population, they can and should be used to delineate the DPS boundary. Such landscape features are the Missouri River in North Dakota and downstream to Omaha, Nebraska, and Interstate Highway 80 from Omaha eastward through Illinois, Indiana, and into Ohio, ending where this highway crosses the Maumee River in Toledo, Ohio. We do not believe these are absolute barriers to wolf movement.

There is evidence that several Minnesota-origin wolves have crossed the Missouri River (Licht and Fritts 1994, pp. 75, 77, Fig. 1 and Table 1; Anschutz in litt. 2003, 2006) and some Midwest wolves have crossed interstate highways (Merrill and Mech 2000, p. 430). There is also evidence that some wolves are hesitant to cross highways (Whittington *et al.* 2004, pp. 7, 9; Wydeven *et al.* 2005b, p. 5; but see Blanco *et al.* 2005, pp. 315–316, 319–320 and Kohn *et al.* 2000, p. 22). Interstate highways and smaller roads are a known mortality factor for wolves and, therefore, pose a partial barrier to wolf movements (Blanco *et al.* 2005, p. 320). The death of a NRM wolf near Sturgis in western South Dakota (Fain in litt. 2006) suggests that the area of the Dakotas west of the Missouri River may be traversed by a small number of wolves coming from both the NRM and WGL wolf populations, as well as wolves from Canada (Licht and Fritts 1994, pp. 75–77). Wolves in this area cannot be assumed to belong to the WGL wolf population, supporting our belief that the boundary should not be designed to include the locations of all known dispersers.

## Recovery of Western Great Lakes Wolves

### Recovery Criteria

Recovery plans are intended to provide guidance to the Service, States, and other partners on methods of minimizing threats to listed species and on criteria that may be used to determine when recovery is achieved. They are not regulatory documents and cannot substitute for the determinations and promulgation of regulations required under section 4(a)(1) of the Act. These documents include, among other elements required under section 4(f) of the Act, criteria for determining when a species can be delisted. There are many paths to accomplishing recovery of a species; in fact, recovery of a species is a dynamic process requiring adaptive management that may, or may not, strictly adhere to the guidance provided in a recovery plan.

We use recovery criteria in concert with evidence that threats have been minimized sufficiently and populations have achieved long-term viability to judge when a species can be reclassified from endangered to threatened or delisted. Recovery plans, including recovery criteria, are subject to change based upon new information and are revised accordingly and when practicable. In a similar sense, implementation of planned actions is subject to changing information and

availability of resources. We have taken these considerations into account in the following discussion.

The 1978 Recovery Plan (hereafter Recovery Plan) and the 1992 Revised Recovery Plan for the Eastern Timber Wolf (hereafter Revised Recovery Plan) contain the same two recovery criteria. The first recovery criterion states that the survival of the wolf in Minnesota must be assured. We, and the Eastern Timber Wolf Recovery Team (Peterson in litt. 1997, 1998, 1999a, 1999b), have concluded that this recovery criterion remains valid. It addresses a need for reasonable assurances that future State, tribal, and Federal wolf management and protection will maintain a viable recovered population of wolves within the borders of Minnesota for the foreseeable future.

Although the recovery criteria identified in the Recovery Plan predate identification of the conservation biology principles of representation (conserving the genetic diversity of a taxon), resilience (the ability to withstand demographic and environmental variation), and redundancy (sufficient populations to provide a margin of safety), those principles were incorporated into the recovery criteria. Maintenance of the Minnesota wolf population is vital in terms of representation and resilience, because the remaining genetic diversity of gray wolves in the eastern United States was carried by the several hundred wolves that survived in Minnesota into the early 1970s. The Recovery Team insisted that the remnant Minnesota wolf population be maintained and protected to achieve wolf recovery in the eastern United States. The successful growth of the remnant Minnesota population has maintained and maximized the representation of that genetic diversity among wolves in the WGL.

Although the Revised Recovery Plan did not establish a specific numerical criterion for the Minnesota wolf population, it did identify, for planning purposes only, a population goal of 1,251–1,400 animals for that Minnesota population (USFWS 1992, p. 28). A population of this size would increase the likelihood of maintaining its genetic diversity over the long term. This large Minnesota wolf population also provides resiliency to reduce the adverse impacts of unpredictable demographic and environmental events. Furthermore, the Revised Recovery Plan specifies a wolf population that is spread across about 40 percent of Minnesota (Zones 1 through 4) (USFWS 1992, p. 28), adding a geographic

component to the resiliency of the Minnesota wolf population.

The second recovery criterion in the Recovery Plan states that at least one viable wolf population should be reestablished within the historical range of the eastern timber wolf outside of Minnesota and Isle Royale, Michigan (USFWS 1992, pp. 24–26). The reestablished population enhances both the resiliency and redundancy of the WGL metapopulation.

The Recovery Plan provides two options for reestablishing this second population. If it is an isolated population, that is, located more than 100 mi (160 km) from the Minnesota wolf population, the second population should consist of at least 200 wolves for at least 5 years, based upon late-winter population estimates, to be considered viable. Late-winter estimates are made at a time when most winter mortality has already occurred and before the birth of pups, thus, the count is made at the annual low point of the population. Alternatively, if the second population is located within 100 mi (160 km) of a self-sustaining wolf population (for example, the Minnesota wolf population), it should be maintained at a minimum of 100 wolves for at least 5 years, based on late-winter population estimates, to be considered viable. A nearby second population would be considered viable at a smaller size because it would be geographically close enough to exchange wolves with the Minnesota population (that is, they would function as a metapopulation), thereby bolstering the smaller second population both genetically and numerically.

The original Recovery Plan did not specify where in the eastern United States the second population should be reestablished. Therefore, the second population could have been established anywhere within the triangular Minnesota-Maine-Florida area covered by the Recovery Plan and the Revised Recovery Plan, except on Isle Royale (Michigan) or within Minnesota. The Revised Recovery Plan identified potential gray wolf reestablishment areas in northern Wisconsin, the UP of Michigan, the Adirondack Forest Preserve of New York, a small area in eastern Maine, and a larger area of northwestern Maine and adjacent northern New Hampshire (USFWS 1992, pp. 56–58). Neither the 1978 nor the 1992 recovery criteria suggest that the restoration of the gray wolf throughout all or most of what was thought to be its historical range in the eastern United States, or to all of these potential reestablishment areas, is

necessary to achieve recovery under the Act.

In 1998, the Eastern Timber Wolf Recovery Team clarified the application of the recovery criterion for the second population to the wolf population that had developed in northern Wisconsin and the adjacent UP of Michigan. This second population is less than 100 mi (160 km) from the Minnesota wolf population. The Recovery Team recommended that the numerical recovery criterion for the Wisconsin-Michigan population be considered met when consecutive late-winter wolf surveys document that the population equals or exceeds 100 wolves (excluding Isle Royale wolves) for the 5 consecutive years between the first and last surveys (Peterson in litt. 1998).

#### *Recovery Trends for Wolves in the Western Great Lakes Region*

##### *Minnesota Recovery*

During the pre-1965 period of wolf bounties and legal public trapping, wolves persisted in the remote northeastern portion of Minnesota but were eliminated from the rest of the State. Estimated numbers of Minnesota wolves before their listing under the Act in 1974 include 450 to 700 wolves in 1950–53 (Fuller *et al.* 1992, p. 43, based on data in Stenlund 1955, p. 19), 350 to 700 wolves in 1963 (Cahalane 1964, p. 10), 750 wolves in 1970 (Leirfallom 1970, p. 11), 736 to 950 wolves in 1971–72 (Fuller *et al.* 1992, p. 44), and 500 to 1,000 wolves in 1973 (Mech and Rausch 1975, p. 85). Although these estimates were based on different methodologies and are not directly comparable, each puts the prelisting abundance of wolves in Minnesota at 1,000 or less. This was the only significant wolf population in the United States outside Alaska during those time periods.

After the gray wolf was listed as endangered under the Act in 1974, the Minnesota population estimates increased (see table 1 below). Mech estimated the population to be 1,000 to 1,200 wolves in 1976 (USFWS 1978, pp. 4, 50–52), and Berg and Kuehn (1982, p. 11) estimated that there were 1,235 wolves in 138 packs in the winter of 1978–79. In 1988–89, the Minnesota Department of Natural Resources (MN DNR) repeated the 1978–79 survey and also used a second method to estimate wolf numbers in Minnesota. The resulting independent estimates were 1,500 and 1,750 wolves in at least 233 packs; the lower number was derived by a method comparable to the 1978–79 survey (Fuller *et al.* 1992, pp. 50–51).

During the winter of 1997–98, the MN DNR repeated a statewide wolf



population and distribution survey, using methods similar to those of the two previous surveys. Field staff of Federal, State, tribal, and county land management agencies and wood products companies were queried to

identify occupied wolf range in Minnesota. Data from 5 concurrent radio telemetry studies tracking 36 packs, representative of the entire Minnesota wolf range, were used to determine average pack size and territory area.

Those figures were then used to calculate a statewide estimate of wolf and pack numbers in the occupied range, with single (nonpack) wolves factored into the estimate (Berg and Benson 1999, pp. 1–2).

TABLE 1—MINIMUM WINTER WOLF POPULATIONS IN MINNESOTA, WISCONSIN, AND MICHIGAN (EXCLUDING ISLE ROYALE) FROM 1976 THROUGH 2010.

[Note That There are Several Years Between the First Three Estimates. Minnesota Does Not Conduct Annual Surveys.]

Year	Number of wolves			
	Minnesota	Wisconsin	Michigan	Wisconsin and Michigan total
1976 .....	1,000–1,200	.....	.....	.....
1978–79 .....	1,235	.....	.....	.....
1988–89 .....	1,500–1,750	31	3	34
1989–90 .....	.....	34	10	44
1990–91 .....	.....	40	17	57
1991–92 .....	.....	45	21	66
1992–93 .....	.....	40	30	70
1993–94 .....	.....	57	57	114
1994–95 .....	.....	83	80	163
1995–96 .....	.....	99	116	215
1996–97 .....	.....	148	113	261
1997–98 .....	2,445	180	139	319
1998–99 .....	.....	205	169	374
1999–2000 .....	.....	248	216	464
2000–01 .....	.....	257	249	506
2001–02 .....	.....	327	278	604
2002–03 .....	.....	335	321	656
2003–04 .....	3,020	373	360	733
2004–05 .....	.....	435	405	840
2005–06 .....	.....	467	434	899
2006–07 .....	.....	546	509	1,055
2007–08 .....	2,921	549	520	1,069
2008–09 .....	.....	637	577	1,214
2009–10 .....	.....	704	557	1,247
2010–11 .....	.....	782	687	1,469

The 1997–98 survey concluded that approximately 2,445 wolves existed in about 385 packs in Minnesota during that winter period (90 percent confidence interval from 1,995 to 2,905 wolves) (Berg and Benson 1999, p. 4). This figure indicated the continued growth of the Minnesota wolf population at an average rate of about 3.7 percent annually from 1970 through 1997–98. Between 1979 and 1989 the annual growth rate was approximately 3 percent, and it increased to between 4 and 5 percent in the next decade (Berg and Benson 1999, p. 5; Fuller *et al.* 1992, p. 51). As of the 1998 survey, the number of Minnesota wolves had reached approximately twice the number specified in the recovery planning goal for Minnesota (USFWS 1992, p. 28).

Minnesota DNR conducted another survey of the State's wolf population and range during the winter of 2003–04, again using methodology similar to the previous surveys. That survey concluded that an estimated 3,020 wolves in 485 packs occurred in

Minnesota (90 percent confidence interval for this estimate is 2,301 to 3,708 wolves) (Erb and Benson 2004, pp. 7, 9). The MN DNR conducted its most recent survey of wolf population and range during the winter of 2007–08. That survey concluded that an estimated 2,921 wolves in 503 packs occurred in Minnesota (90 percent confidence interval for this estimate is 2,192 to 3,525 wolves). The results of the past three surveys suggest that the wolf population has been numerically stable over the past 10 or more years (Erb 2008, p. 6).

As wolves increased in abundance in Minnesota, they also expanded their distribution. During 1948–53, the primary wolf range was estimated at 11,954 sq mi (31,080 sq km) (Stenlund 1955, p. 19). A 1970 questionnaire survey in Minnesota resulted in an estimated wolf range of 14,769 sq mi (38,400 sq km) (calculated by Fuller *et al.* 1992, p. 43, from Leirfallom 1970). Fuller *et al.* (1992, p. 44), using data from Berg and Kuehn (1982), estimated that Minnesota primary wolf range

encompassed 14,038 sq mi (36,500 sq km) during the winter of 1978–79. By 1982–83, pairs or breeding packs of wolves were estimated to occupy an area of 22,000 sq mi (57,050 sq km) in northern Minnesota (Mech *et al.* 1988, p. 86). That study also identified an additional 15,577 sq mi (40,500 sq km) of peripheral range, where habitat appeared suitable but no wolves or only lone wolves existed. The 1988–89 study produced an estimate of 23,165 sq mi (60,200 sq km) as the contiguous wolf range at that time in Minnesota (Fuller *et al.* 1992, pp. 48–49; Berg and Benson 1999, pp. 3, 5), an increase of 65 percent over the primary range calculated for 1978–79.

The 1997–98 study concluded that the contiguous wolf range had expanded to 33,971 sq mi (88,325 sq km), a 47 percent increase in 9 years (Berg and Benson 1999, p. 5). By that time the Minnesota wolf population was using most of the available primary and peripheral range identified by Mech *et al.* (1988, p. 86). The wolf population in Minnesota had increased in abundance

and distribution to the point that its contiguous range covered approximately 40 percent of the State during 1997–98. In contrast, the 2003–04 survey failed to show a continuing expansion of wolf range in Minnesota, and any actual increase in wolf numbers since 1997–98 was attributed to increased wolf density within a stabilized range (Erb and Benson 2004, p. 7). The results of the 2007–08 survey also indicated that wolf range in Minnesota remained “essentially unchanged” since 2004 (Erb 2008, not paginated).

Although the Minnesota DNR does not conduct a formal wolf population survey annually, it includes the species in its annual carnivore track survey. This survey, standardized and operational since 1994, provides an annual index of abundance for several species of large carnivores by counting their tracks along 20-mile (32-km) long standardized survey routes in northern Minnesota. In 2009, wolves were detected on 71 percent of the 58 routes surveyed, and the resulting indices of abundance and distribution were not appreciably different from recent years (Erb 2009, not paginated).

#### Summary for Minnesota

The Minnesota wolf population has increased from an estimated 1,000 individuals in 1976 to nearly 3,000 today, and the estimated wolf range in the State has expanded by approximately 225 percent (from approximately 15,000 sq mi (38,850 sq km) to approximately 34,000 sq mi (88,060 sq km)) since 1970. Over the past 10–12 years, the population size and range have remained stable, as most of the primary and peripheral habitat has been occupied. Based on the current abundance and distribution of the Minnesota wolf population, we believe its continued survival is ensured, and it achieves the first recovery criterion of the Revised Recovery Plan.

#### Wisconsin Recovery

Wolves were considered to have been extirpated from Wisconsin by 1960. No formal attempts were made to monitor the State’s wolf population from 1960 through 1978. Although individual wolves and an occasional wolf pair were reported from 1960 through 1975, (Thiel 1978, Thiel 1993), there was no documentation of wolf reproduction occurring in Wisconsin, and the wolves that were reported may have been dispersing animals from Minnesota.

Wolves are believed to have reestablished breeding packs in Wisconsin in the winter of 1975–76. The Wisconsin Department of Natural Resources (WI DNR) began wolf

population monitoring in 1979–80, estimating a statewide population of 25 wolves at that time (Wydeven and Wiedenhoef 2000, pp. 151, 159; Wydeven *et al.* 2009c, pp. 93–97). This population remained relatively stable for several years, and then declined to approximately 14 to 19 wolves in the mid-1980s. In the late 1980s, the Wisconsin wolf population began an increase that has continued into 2010, when 690 wolves were counted (Wydeven *et al.* 2010, Figure 3).

Since 1979, WI DNR has intensively surveyed its wolf population on an annual basis using a combination of aerial, ground, and satellite radio telemetry complemented by snow tracking and wolf sign surveys (Wydeven *et al.* 2006a, pp. 4–5; Wydeven *et al.* 2009c, pp. 90–91). Wolves are trapped from May through September and fitted with radio collars, with a goal of having at least one radio-collared wolf in approximately half of the wolf packs in Wisconsin. Aerial locations are obtained from each functioning radio-collar about once per week, and pack territories are estimated and mapped from the movements of the individuals who exhibit localized patterns. From December through March, the pilots make special efforts to visually locate and count the individual wolves in each radio-tracked pack.

Snow tracking is used to supplement the information gained from aerial sightings and to provide pack size estimates for packs lacking a radio-collared wolf. Tracking is done by assigning survey blocks to trained trackers, who then drive snow-covered roads in their blocks and follow all wolf tracks they encounter. Snowmobiles are used to locate wolf tracks in more remote areas with few roads. The results of the aerial and ground surveys are carefully compared to properly separate packs and to avoid overcounting (Wydeven *et al.* 2006a, pp. 4–5). The estimated number of wolves in each pack is based on the aerial and ground observations made of the individual wolves in each pack over the winter.

Because the monitoring methods focus on wolf packs, lone wolves are likely undercounted in Wisconsin. As a result, the annual population estimates are probably slight underestimates of the actual wolf population within the State during the late-winter period. Fuller (1989, p. 19) noted that lone wolves are estimated to compose from 2 to 29 percent of the total population in the area. Wisconsin DNR surveys have estimated 2–15 percent of the winter population as loners (Wydeven *et al.* 2009c, p. 96). These surveys, however, are focused on heavily forested portions

of northern and central Wisconsin; therefore, dispersing wolves traveling in other portions of the State are less likely to be detected, and often such wolves are only documented after vehicle collisions or accidental shootings. Broader use of trail cameras by members of the public is improving the WI DNR’s ability to detect lone wolves across the State.

As previously stated, population estimates are made at the low point of the annual wolf population cycle. Thus, Wisconsin wolf population estimates are conservative in two respects. They undercount lone wolves, and the count is made at the annual low point of the population. This methodology is consistent with the recovery criteria established in the Revised Recovery Plan, which established numerical criteria to be measured with data obtained by late-winter surveys. Based on these considerations, an estimated 690 to 733 wolves in 181 packs, including 35 wolves on Native American reservations, were in Wisconsin in early 2010, representing an 8 percent increase from 2009 (Wydeven *et al.* 2010, pp. 12–13).

In the winter of 1994–95, wolves were first documented in Jackson County, Wisconsin, well to the south of the area occupied by other Wisconsin wolf packs in the northern part of the State (Thiel *et al.* 2009, pp. 109–110). The number of wolves in this central Wisconsin area has dramatically increased since that time. During the winter of 2009–10, there were 100–106 wolves in 25 packs in the central forest wolf range (Zone 2 in the Wisconsin Wolf Management Plan; Wydeven *et al.* 2010, p. 5) and an additional 46 to 48 wolves in 12 or 13 packs in the marginal habitat in Zone 3, located between Zone 1 (northern forest wolf range) and Zones 2 and 4 (Wydeven *et al.* 2010, p. 5).

During the winter of 2004–05, 11 to 13 wolves were believed to be primarily occupying Native American reservation lands in Wisconsin (Wydeven *in litt.* 2005); this increased to 16 to 17 in 2005–06, 17 to 19 in 2007–08 (Wydeven and Wiedenhoef 2008, Summary), approximately 27 in 2008–2009 (Wydeven and Wiedenhoef 2008, p. 1), and approximately 35 in 2009–10 (Wydeven *et al.* 2010, p. 1). The 2009–10 survey consisted of 3 packs totaling 10–11 wolves on the Bad River Chippewa Reservation and a pack of 2 wolves on the Lac Courtes Oreilles Chippewa Reservation, both in northwestern Wisconsin. There also were two packs of five wolves each on the Lac du Flambeau Reservation in north-central Wisconsin. A pack of four wolves and three pairs occurred on the

Menominee Reservation and a three-wolf pack occurred on the Stockbridge Reservation, both in northeastern Wisconsin (Wydeven *et al.* 2010, Table 6). A pack of four to five wolves spent time on portions of the Red Cliff Chippewa Reservation along the Lake Superior shoreline. Wolf packs also used scattered lands of the St. Croix Chippewa in northwest Wisconsin, the Ho Chunk Nation in central Wisconsin, and Potawatomi in northeast Wisconsin. The tribal land of the Ho-Chunk, St. Croix Chippewa, and Potawatomi are composed mostly of scattered parcels of land, and are not likely to provide significant amounts of wolf habitat. About 90 percent of packs in northern Wisconsin Zone 1, and northern portions of Zone 3 are located in ceded territory where Chippewa Bands have retained hunting and gathering rights.

In 2002, wolf numbers in Wisconsin alone surpassed the 1992 Revised Recovery Plan criterion for a second population within 100 miles of the Minnesota population (100 wolves for a minimum of 5 consecutive years (USFWS 1992, p. 4)). Furthermore, in 2004, Wisconsin wolf numbers exceeded the 1992 recovery criterion of 200 animals for 6 successive late-winter surveys for an isolated wolf population (USFWS 1992, p. 4). Wisconsin population estimates for 1985 to 2010 increased from 15 to 690 wolves (see table 1 above) and from 4 to 181 packs (Wydeven *et al.* 2010, figure 3). This represents an annual population increase of 21 percent through 2000, and an average annual increase of 11 percent annually for the period 2004–2010. The slower rates of increase since 2000 are an indication that the State's wolf population growth and geographic expansion are beginning to level off.

#### Michigan Recovery

Except for Isle Royale, wolves were extirpated from Michigan as a reproducing species long before they were listed as endangered under the Act in 1974. Prior to 1989, the last known breeding population of wild Michigan wolves outside Isle Royale occurred in the mid-1950s. However, as wolves began to reoccupy northern Wisconsin, the Michigan Department of Natural Resources (MI DNR) began noting single wolves at various locations in the UP of Michigan. Wolf recovery in Michigan began with the documentation of three wolves traveling together and making territorial marks in the central UP during the fall of 1988; and the subsequent birth of pups in this territory during spring 1989 (Beyer *et al.* 2009, p. 73). Since that time, wolf packs have spread throughout the UP, with

immigration occurring from Wisconsin on the west and possibly from Ontario on the east. Wolves now are found in every county of the UP, with the possible exception of Keweenaw County (Huntzinger *et al.* 2005, p. 6; Roell 2009, pers. comm.).

The MI DNR annually monitors the wolf population in the UP by conducting a winter survey. Roads and trails are searched intensively and extensively for wolf tracks and other wolf sign using trucks and snowmobiles (Potvin *et al.* 2005). Complete surveys conducted from 1999 to 2006 provided an opportunity to evaluate multiple sampling approaches (MI DNR 2008). Based on these evaluations, it was determined that a geographically stratified sampling protocol produced unbiased, precise estimates of wolf abundance (Potvin *et al.* 2005; Drummer, unpublished data). The sampling protocol implemented in 2007 allows trackers to spend more time in smaller areas (MI DNR 2008).

The UP is divided into 21 survey units from which a stratified random sample is drawn, covering roughly 50 percent of the UP every year (MI DNR 2008). Pack locations are derived from previous surveys, citizen reports, and extensive ground and aerial tracking of radio-collared wolves. During the winter of 2009–10, the UP had 557 wolves in 109 resident packs (MI DNR in litt. 2010, Table 1). Surveys along the border of adjacent survey units are coordinated to avoid double counting of wolves and packs occupying those border areas. In areas with a high density of wolves, ground surveys by four to six surveyors with concurrent aerial tracking are used to accurately delineate territories of adjacent packs and count their members (Beyer *et al.* 2004, pp. 2–3; Huntzinger *et al.* 2005, pp. 3–6; Potvin *et al.* 2005, p. 1661). As with Wisconsin, the Michigan surveys likely miss lone wolves, thus underestimating the actual population.

Based on annual surveys in late winter, estimates of wolves in the UP increased from 57 wolves in 1994 to 557 in late winter 2009–10 (see table 1 above). Over the last 10 years, the annualized rate of increase has been about 12 percent (MI DNR in litt. 2010, table 1). This rate has varied from year to year, but there appear to be two distinct phases of population growth, with relatively rapid growth (25.8 percent average) from 1995 through 2000 and slower growth (10.1 percent average) from 2001 through 2010. In 2005, the number of wolves in the Michigan population alone surpassed the recovery criterion for an isolated wolf population of 200 animals for 6

successive late-winter surveys, as specified in the Revised Recovery Plan (USFWS 1992, pp. 24–26).

To date, no wolf packs are known to be primarily using tribal-owned lands in Michigan (Roell 2011, pers. comm.). Native American tribes in the UP of Michigan own small, scattered parcels of land relative to the size of wolf pack territories. Thus, no one tribal property would likely support a wolf pack. However, as wolves occur in all counties in the UP and are wide-ranging, tribal land is likely used periodically by wolves.

In October 2004, a coyote trapper mistakenly captured and killed a wolf in Presque Isle County in the northern Lower Peninsula (LP) of Michigan. This was the first verification of a wolf in the northern LP in at least 65 years (Roell *et al.* 2010, p. 4). This wolf had been trapped and radio-collared by the MI DNR the previous year (2003) while it was a member of an eastern UP pack. Since 2004, Michigan has surveyed the northern LP to determine whether wolves had successfully colonized the area. From 2005 through 2007, the survey had two components: a prioritized area search and a targeted area search based on citizen reports of wolves or wolf sign. USDA–Wildlife Services, Little Traverse Bay Band of Odawa Indians, and Central Michigan University worked cooperatively on the surveys. Nine units ranging in size from 200–400 sq mi (322–644 sq km) were surveyed; however, no wolf sign was found (Roell *et al.* 2010, p. 4). Beginning in 2008, a targeted search approach was used. The MI DNR issued a press release asking citizens to report any wolves or wolf sign; again, no wolves were detected in winters of 2008–10 (Roell *et al.* 2009, p. 5; Roell 2010, pers. comm.).

In 2008, the DNR recognized the likelihood that small numbers of wolves would eventually move into the northern LP and form persistent packs (Potvin 2003, pp. 29–30; Gehring and Potter 2005, p. 1242; Beyer *et al.* 2006, p. 35), and revised its Wolf Management Plan in part to incorporate provisions for wolf management in the northern LP (MI DNR 2008a, p. 46). In the summer of 2009, video images of single wolves were recorded in two of the three northern LP counties nearest to the UP (Roell *et al.* 2010, p. 4). The videos, taken in Emmet County in May 19, 2009, and Presque Isle County in July 27, 2009, may have been of the same animal (Roell 2009, pers. comm.). In 2010, USDA Wildlife Services and MI DNR staff reported a single breeding pair with three pups in Cheboygan County in the northern LP (MI DNR 2010). That 2010 report was based on an

assessment of the physical features of three pups that were captured and handled, observations of adult wolf-sized tracks, and remote camera photographs of large wolf-like canids. Subsequent DNA analysis indicated the pups were likely siblings and based on microsatellite genotyping, all three were classified as eastern coyotes rather than some form of Great Lakes wolf. The three pups shared an eastern wolf mtDNA haplotype, which suggests maternal introgression from a female wolf into their pedigree. Wheeldon (unpublished data) considers a likely scenario is that a female wolf bred with a male coyote and their female offspring backcrossed with male coyotes for an undetermined number of generations, culminating in the animals handled.

The wolf population of Isle Royale National Park, Michigan, is not considered to be an important factor in the recovery of wolves in the WGL. The Park population is small and isolated and lacks genetic uniqueness (Wayne *et al.* 1991, pp. 47–49). For genetic reasons and constraints on expansion due to the island's small size, this wolf population does not contribute significantly towards meeting numerical recovery criteria; however, long-term research on this wolf population has added a great deal to our knowledge of the species. The wolf population on Isle Royale has ranged from 12 to 50 wolves since 1959, and was 16 wolves in the winter of 2010–2011 (Vucetich and Peterson 2011, p. 3).

#### Summary for Wisconsin and Michigan

The two-State wolf population, excluding Isle Royale wolves, has exceeded 100 wolves since late-winter 1993–94 and has exceeded 200 wolves since late-winter 1995–96. Therefore, the combined wolf population for Wisconsin and Michigan has exceeded the second recovery criterion of the 1992 Revised Recovery Plan for a nonisolated wolf population, since 1999. Furthermore, the two-State population has exceeded the recovery criterion for an isolated second population since 2001.

#### Other Areas In and Near the Western Great Lakes DPS

No surveys have been conducted to document the number of wolves present in North Dakota or South Dakota, but an increasing number of wolves has apparently been detected in the eastern portions of these States. The eastern boundaries of North Dakota and South Dakota are approximately 19 and 81 mi (30 and 130 km), respectively, from occupied habitat in Minnesota. Biologists who are familiar with wolves

in these States, however, generally agree that the wolves found there are primarily lone dispersers, although there were reports of pups being seen in the Turtle Mountains of North Dakota, in 1994 (Collins in litt. 1998).

Other records include an adult male shot near Devil's Lake, North Dakota, in 2002, another adult male shot in Richland County in extreme southeastern North Dakota in 2003 (Fain in litt. 2006), and a vehicle-killed adult male found near Sturgis, South Dakota, in 2006 (Larson in litt. 2006). In contrast to the other South Dakota wolves of the last 25 years, the animal found near Sturgis was genetically identified as having come from the Greater Yellowstone area (Fain in litt. 2006). Most recently, a wolf was shot in Roberts County, South Dakota, in January 2009 (reportedly running with two or three other wolves) (Prieksat in litt. 2009), and another wolf was found dead in a foothold trap that was set as part of an ongoing USDA Wildlife Service's coyote control operation in southeastern Eddy County, North Dakota (Bicknell in litt. 2009). See *Delineating the Boundaries of the WGL DPS* in this rule for a detailed discussion of movement of wolves.

Wolf dispersal is expected to continue as wolves travel away from the more saturated habitats in the core range into peripheral areas where wolves are extremely sparse or absent. Unless they return to the primary range and join or start a pack there, they are unlikely to contribute to long-term maintenance of WGL wolf populations.

Although it is possible for these dispersers to encounter and mate with a mature wolf outside the primary range, the lack of large expanses of unfragmented habitat make it unlikely that wolf packs will persist in these peripheral areas; lack of contiguous habitat is expected to seriously impede further expansion. The only exception is the northern LP of Michigan, where several studies indicate that a persistent wolf population may develop (Gehring and Potter 2005, p. 1242; Potvin 2003, pp. 29–30), albeit dependent on occasional to frequent immigration of UP wolves. Despite the constraints on further expansion described here, however, current wolf populations in Minnesota, Wisconsin, and the UP of Michigan have already greatly exceeded the recovery levels defined in the 1992 Revised Recovery Plan, and maintenance of these numbers is not contingent on recruitment of wolves from areas outside the primary range that has been established for the WGL.

#### *Summary of Wolf Recovery in the Western Great Lakes Region*

Wolves in the WGL DPS greatly exceed the recovery criteria (USFWS 1992, pp. 24–26) for (1) a secure wolf population in Minnesota, and (2) a second population outside Minnesota and Isle Royale consisting of 100 wolves for 5 successive years. Based on the criteria set by the Eastern Wolf Recovery Team in 1992 and reaffirmed in 1997 and 1998 (Peterson in litt. 1997, in litt. 1998), the DPS contains sufficient wolf numbers and distribution to ensure their long-term survival within the DPS.

The maintenance and expansion of the Minnesota wolf population has maximized the preservation of the genetic diversity that remained in the WGL DPS when its wolves were first protected in 1974. Furthermore, the Wisconsin-Michigan wolf population has exceeded the numerical recovery criterion even for a completely isolated second population. Therefore, even in the unlikely event that this two-State population was to become totally isolated and wolf immigration from Minnesota and Ontario completely ceased, it would still remain a viable wolf population for the foreseeable future, as defined by the Revised Recovery Plan (USFWS 1992, pp. 25–26). Finally, each of the wolf populations in Wisconsin and Michigan has exceeded 200 animals for 11 and 10 years, respectively, so if either were somehow to become isolated, they would remain viable, and each State has committed to manage its wolf population at or above viable population levels. The wolf's numeric and distributional recovery criteria in the WGL have been met.

#### *Have the historical wolves of the western great lakes region been restored?*

Leonard and Wayne (2008, p. 3) have stated that Great Lakes wolves have not been restored based on absence of certain historical mtDNA haplotypes from the current population, an estimated historical population size far greater than the current population size, and the admixture (similar to hybridization, but does not imply the generation in which the mixing occurred) of what they have identified as coyote and western wolf haplotypes in the current population.

The spatial representativeness of both the historical and recent samples reported by Leonard and Wayne (2008) has been questioned by Mech (2009). For example, 16 recent but no historical samples from Minnesota were included in the study. Leonard and Wayne (2009)

responded that they did not believe that genetic differences were likely to be pronounced at the geographic scale discussed by Mech and Paul (2008) and Mech (2009).

The current population of wolves in Minnesota, Wisconsin, and Michigan is derived from expansion of the remnant population in northeastern Minnesota (Fain *et al.* 2010, p. 12), supplemented by western gray wolves (Mech and Frenzel 1971; Mech 2010, p. 135), and in the case of UP Michigan, with possible contributions from wolves from southern Ontario (Fain *et al.* 2010, p. 12).

Subsequent studies with larger samples of the current wolf population find, despite acknowledged influence of western gray wolves, the current population is generally representative of the historical population (Fain *et al.* 2010, p. 14; Wheeldon *et al.* 2010). Koblmüller *et al.* (2009, pp. 10–11) found “comparatively slight” differentiation at autosomal microsatellite DNA loci between historical and current Great Lakes wolves. Wheeldon and White (2009, p. 4) present microsatellite DNA evidence that the hybridization processes noted by Leonard and Wayne (2008) were taking place over a century ago, so that the current population is comparable to the historical population with respect to admixture. They believe hybridization between eastern wolves and western wolves in the western Great Lakes region occurred prior to significant human effects on population size or habitat (Fain *et al.* 2010, p. 14). According to Fain *et al.* (2010, p. 14), the current population of wolves in the western Great Lakes “represents an ancient component of the northeast ecosystem and have been established throughout the region for thousands of years.”

The loss of mtDNA haplotypes found in the historical but not the current western Great Lakes wolf population reported by Leonard and Wayne (2008, pp. 2–3), and the loss of allelic diversity (Fain *et al.* 2010, p. 11), indicate that a genetic bottleneck occurred when wolves were nearly extirpated from the western Great Lakes region and during the period of slow recovery that immediately followed. Despite these “founder effects” on the genetic composition of the western Great Lakes population, various measures of genetic diversity remain comparable to other wolf populations (Koblmüller *et al.* 2009; Fain *et al.* 2010, p. 12; Wheeldon *et al.* 2010), at least partially owing to contributions from western gray wolves.

Wolves in the WGL region display a healthy level of heterozygosity (Fain *et*

*al.* 2010, p. 12), and show no evidence that a genetic bottleneck may have influenced genetic diversity (Koblmüller *et al.* 2009, p. 1). Schwartz and Vucetich (2009, p. 2) have stated that “By all accounts, the return of wolves to the Great Lakes region has been successful \* \* \* they are doing superbly—both in terms of population viability and ecological function.” Cronin and Mech (2009, p. 2) state, “It is generally acknowledged that the Great Lakes wolf population is fit, with abundant genetic variation” (Cronin and Mech 2009, p. 2).

When the Service revised the endangered species list in 1978 to include the species *Canis lupus* in the lower 48 States and Mexico, regulatory protections were applied to all gray wolves in the lower 48 States, including all subspecies of gray wolves. That rule classified the Minnesota gray wolf population as a threatened “species” and gray wolves elsewhere in the lower 48 States and Mexico as another “species” with endangered status. This reclassification was undertaken because of uncertainty about the taxonomic validity of some of the previously listed subspecies and because we recognized that wolf populations were historically connected, and that subspecies boundaries were thus malleable.

This listing arrangement [of four subspecies] has not been satisfactory because the taxonomy of wolves is out of date, wolves may wander outside of recognized subspecific boundaries, and some wolves from unlisted subspecies may occur in certain parts of the lower 48 States. In any case, the Service wishes to recognize that the entire species *Canis lupus* is Endangered or Threatened to the south of Canada, and considers that this matter can be handled most conveniently by listing only the species name.” (43 FR 9607).

Since then, except for the short periods during which wolves were delisted, all wolves in the WGL have been protected under that 1978 listing. The recovery of all wolves in the WGL was guided first by the 1978 Recovery Plan and then by the 1992 revised Recovery Plan for the Eastern Timber Wolf. The wolves that were the subject of those documents are the wolves that have been recovered in the WGL. The debate regarding the *C. lupus* nomenclature that was identified in the 1974 and 1978 listings and in the recovery plans continues to date in the scientific community. Regardless of this debate regarding nomenclature, those listings allowed the wolf population that remained in northern Minnesota to flourish and reestablish the population throughout the core range we have today in Minnesota, Wisconsin, and the UP of Michigan. It is clear that the

existing wolves in the WGL are the descendants of the wolves that were listed in 1978; the wolves that were the subject of the recovery plans; the wolves that have met recovery goals; and the wolves that will be managed by States, Tribes, and other Federal agencies after delisting.

### Summary of Comments and Recommendations

In the proposed rule published on May 5, 2011 (76 FR 26806), we requested that all interested parties submit written comments on the proposal by July 5, 2011. We also contacted appropriate Federal and State agencies, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. Newspaper notices inviting general public comment were published in the Bangor Daily News (Maine), Duluth News-Tribune (Minnesota), Lansing State Journal (Michigan), Marquette Mining Journal (Michigan), Milwaukee Journal Sentinel (Wisconsin), Minneapolis Star Tribune (Minnesota), Portland Press Herald (Maine), and Wausau Daily Herald (Wisconsin). We held a public hearing on May 18, 2011, in Ashland, Wisconsin, and one on June 8, 2011, in Augusta, Maine. We also held two public information meetings, one in Grand Rapids, Minnesota, on June 14, 2011, and the other in Marquette, Michigan on June 16, 2011.

On August 25, 2011, we published a notice in the **Federal Register** (76 FR 53379) reopening the public comment period on the May 5, 2011, proposal. We reopened the comment period to allow for additional public review and the inclusion of any new information, specifically concerning North American wolf taxonomy. That notice also informed the public that we were considering issuing separate final rules for our final determinations on the proposed delisting of the Western Great Lakes DPS and the proposed determination regarding all or portions of the 29 States considered to be outside the historical range of the gray wolf. The second comment period closed on September 26, 2011.

During the first comment period for the proposed rule, we received 713 unique comments directly addressing the proposed delisting of gray wolves in the WGL DPS. During the second comment period for the proposed rule, we received 124 unique comments directly addressing the proposed delisting of gray wolves in the WGL DPS. These comments included verbal and written comments received at the public hearings. Comments were

submitted by 24 nongovernmental organizations representing a variety of interest groups including preservation, conservation, animal welfare, agriculture or livestock, and sportsmen's organizations. Two Federal agency representatives provided comments, six State agency representatives provided comments, and one elected official provided a comment. Six comments were received from Native American Tribes or tribal government agencies or organizations.

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinion from four knowledgeable individuals with scientific expertise that included familiarity with wolves and their habitat, biological needs, and threats. We received responses from three of the peer reviewers.

We reviewed all comments received from the peer reviewers for substantive issues and new information regarding delisting wolves in the western Great Lakes. The peer reviewers concurred with our conclusion that delisting wolves in the WGL DPS is warranted and provided additional information, clarifications, and suggestions to improve the final rule.

Comments received are addressed in the following summary and incorporated into the final rule as appropriate.

#### Comments

(1) *Comment:* We received numerous comments, including from peer reviewers, regarding wolf taxonomy, primarily with regards to whether *C. lycaon* should be recognized as a separate species from *C. lupus*.

*Our Response:* The extensive information submitted during the comment periods and recent publications on the subject and the widely diverging views expressed in the pertinent scientific studies underscore the enduring debate regarding the taxonomy of North American wolves—a debate that may not be resolved for some time (see Wolf Taxonomy in the Western Great Lakes Region for a full discussion). Although there is not a significant number of new publications that have become available since we published our proposal in May 2011, the substance of those new publications and the substantive comments we received have led us to reconsider our proposed decision.

Based on a reevaluation of the available scientific information and the evolving and ongoing scientific debate, we reconsidered our position, as expressed in the proposed rule (76 FR 26086), that the gray wolf subspecies

*Canis lupus lycaon* should be elevated to the full species *Canis lycaon* and that the population of wolves in the WGL is a mix of the two full species, *Canis lupus* and *Canis lycaon*. While there are varying scientific opinions on the taxonomic history of North American wolves, *Canis lupus* is the species that has been recognized in the WGL for a long time and throughout this technical debate, and there is significant information indicating that continuing to recognize *Canis lupus* as the species in the WGL is appropriate (see Wolf Taxonomy in the Western Great Lakes Region). Having reviewed and assessed all of the available scientific information, including, in particular, the comments received on the proposed rule and the information that has become available since the proposed rule was published, we have decided the better conclusion is to retain our previous taxonomic recognition of wolves in the WGL as gray wolves (*Canis lupus*). Therefore, in this final rule we consider all wolves in the WGL DPS to be gray wolves (*Canis lupus*) and are delisting them as such.

(2) *Comment:* We received numerous requests from diverse interest groups and individuals asking that we subdivide our final determination on delisting the WGL DPS from the final determination on the rest of the proposed actions for the eastern United States.

*Our Response:* We are separating our determination on the delisting of the Western Great Lakes DPS from the determination on our proposal regarding all or portions of the 29 eastern States we considered to be outside the historical range of the gray wolf. This rule finalizes our determination for the WGL DPS. A subsequent decision will be made for the rest of the eastern United States.

(3) *Comment:* We received numerous comments from diverse interest groups and individuals stating that the Service should treat wolves in the western Great Lakes area as a single, connected population and analyze them as such. Others commented that the wolves that occupy the WGL DPS, regardless of scientific species classification, were and continue to be the same wolves that were protected under the Act over 30 years ago. The wolves that are in the WGL DPS now are what was listed, what met the recovery goals, and what should be delisted.

*Our Response:* In this final rule we consider all wolves in the WGL DPS to be members of a single species, the gray wolf (*Canis lupus*) and are delisting them as such. When the Service revised the endangered species list in 1978 to

include the species *Canis lupus* in the lower 48 States and Mexico, regulatory protections were applied to all gray wolves in the lower 48 States, including all subspecies of gray wolves. The wolf population in Minnesota was listed separately as a threatened species, while the rest of the lower 48 States and Mexico were listed as endangered. The recovery of all wolves in the WGL was guided first by the 1978 Recovery Plan and then by the 1992 revised Recovery Plan for the Eastern Timber Wolf. The wolves that were the subject of those documents are the wolves that have been recovered in the WGL. The debate regarding the *C. lupus* nomenclature that was identified in the 1974 and 1978 listings and in the recovery plans continues to date in the scientific community. Regardless of this debate regarding nomenclature, those listings allowed the wolf population that remained in northern Minnesota to flourish and reestablish the population throughout the core range we have today in Minnesota, Wisconsin, and the UP of Michigan. The existing wolves in the WGL are the descendants of wolves in the Minnesota *C. lupus* population that was protected in the 1978 listing; the wolves that were the subject of the recovery plans; the wolves that have met recovery goals; and the wolves that will be managed by States, Tribes, and other Federal agencies after delisting.

(4) *Comment:* The Service must analyze how hybridization with eastern wolves is affecting the viability of gray wolves.

*Our Response:* In light of the ongoing scientific debate, and the lack of clear resolution concerning the taxonomy of wolves in the western Great Lakes, we are at this time continuing to recognize *C. lupus* as the only species that occurs in the WGL. The wolves that occupy the WGL DPS have long been accepted as gray wolves, *C. lupus*, and until greater scientific consensus is reached regarding whether to revise this taxonomic classification, the better conclusion is to continue to recognize them as gray wolves. See Wolf Taxonomy in the Western Great Lakes Region for a full discussion.

(5) *Comment:* If two species of wolves exist in the WGL, those two species need to be evaluated separately to determine if each has independently been recovered; or the Service must determine whether the gray wolves (*C. lupus*) in the WGL, independent of *C. lycaon*, have met the numerical recovery criteria in the Eastern Timber Wolf Recovery Plan. Others express that because the WGL population is admixed, the Service cannot determine if the gray wolf (*C. lupus*) itself has been



recovered. We also received comments stating that the boundaries of the WGL DPS must be based on the gray wolf alone, not on the two species combined.

*Our Response:* In light of the ongoing scientific debate, and the lack of clear resolution concerning the taxonomy of wolves in the western Great Lakes, we are at this time continuing to recognize *C. lupus* as the only species that occurs in the WGL. The wolves that occupy the WGL DPS have long been accepted as gray wolves, *C. lupus*, and until greater scientific consensus is reached regarding whether to revise this taxonomic classification, it is most logical to continue to recognize them as gray wolves. See Wolf Taxonomy in the Western Great Lakes Region for a full discussion.

(6) *Comment:* A few commenters stated that wolves have not achieved recovery because disease, illegal killing, and other human-caused mortality, or inadequate regulatory mechanisms still threaten wolves in the WGL. Others stated that the Service has not provided a complete analysis of threats to wolves in the WGL.

*Our Response:* Our detailed review of the past, current, and likely future threats to wolves within the WGL DPS identified human-caused mortality of all forms to constitute the majority of documented wolf deaths. However, the wolf populations in Wisconsin and Michigan have continued to expand in numbers and the Minnesota wolf population is at least maintaining itself at well over the population goal recommended in the 1992 Recovery Plan and at about twice the minimum level established in the 2001 Minnesota Wolf Plan. Healthy wolf populations clearly can withstand a high level of mortality, from human and other causes, and remain viable. We believe that, for purposes of this delisting decision, the numerical growth and range expansion shown by WGL DPS wolves indicate that adequate control of human-caused mortality already exists since the species is being maintained at healthy levels.

With regard to disease, several diseases have had noticeable impacts on wolf population growth in the Great Lakes region in the past. Despite these and other diseases and parasites, the overall trend for wolf populations in the WGL DPS continues to be upward. Wolf management plans for Minnesota, Michigan, and Wisconsin include disease monitoring components that we expect will identify future disease and parasite problems in time to allow corrective action to avoid a significant decline in overall population viability. Disease may eventually limit overall

wolf carrying capacity and contribute to annual fluctuations in wolf abundance, but at current and foreseeable population levels, diseases are not likely to affect viability or put wolves at risk again of becoming endangered or threatened.

We conducted a thorough analysis of the existing and likely future threats to wolves, giving specific consideration to the five categories of threats set forth in section 4(a)(1) of the Act—(1) habitat destruction or degradation or a reduction in the range of the gray wolf; (2) utilization by humans; (3) disease, parasites, or predatory actions by other animals or humans; (4) State, Tribal, and Federal regulatory measures; and (5) other threats (see Summary of Factors Affecting the Species). Based on our consideration of these factors individually and in combination, we concluded the Western Great Lakes wolf population is neither in danger of extinction nor likely to become so in the foreseeable future, in all or a significant portion of the population's range.

(7) *Comment:* A number of comments expressed opposition to delisting, making statements such as “wolves should always be protected” by the Act and “why do wolves have to be delisted.”

*Our Response:* The Act provides the Federal Government with authority to protect and recover threatened and endangered species. When a species has been recovered to the extent that it no longer meets the definition of “threatened” or “endangered,” the Act provides that it should be removed from the Federal List of Endangered and Threatened Wildlife and Plants and its management be returned to the appropriate States and tribes (in cases where treaties identify such authorities for tribes). The goal of the Act is to recover listed species and then to delist them when they no longer qualify as threatened or endangered, thereby allowing the Service to focus its efforts on the many other species that do qualify as threatened and endangered. The WGL gray wolf DPS no longer meets the definition of a threatened or endangered species, as it has achieved long-standing recovery criteria by greatly expanding in numbers and geographic range and threats to its long-term viability have been reduced or eliminated. Therefore, the Act requires delisting the species, but it also requires that we continue to monitor the status of the species for a minimum of 5 years after delisting, and we can list it again if the monitoring results show that to be necessary.

(8) *Comment:* The WGL DPS should be reclassified to threatened instead of

delisted as this would allow Wisconsin and Michigan to implement depredation control programs while maintaining the Act's protections for wolves.

*Our Response:* We believe the gray wolf has achieved recovery in the WGL DPS and our five-factor analysis indicates that it is no longer endangered or threatened. Therefore, it should be delisted with management returning to the States and tribes.

(9) *Comment:* The Service should encourage North Dakota to revise its classification of the wolf and adopt a wolf management plan for the State.

*Our Response:* The core of the range for the western Great Lakes population of gray wolves is in Minnesota, Wisconsin, and Michigan. Wolf management plans are only needed for these three States for the Service to be assured that WGL wolves will be managed in such a manner that they are not likely to become an endangered species in the foreseeable future. If North Dakota or other States within the WGL DPS wish to develop wolf management plans, the Service will provide technical assistance and guidance as requested.

(10) *Comment:* A couple of commenters stated that the Service improperly designated the WGL DPS for the purpose of delisting, further stating that the DPS tool is intended to be used to protect a population segment without having to list the entire species.

*Our Response:* In this rule we recognize that the Minnesota gray wolf population listed as a species in 1978 has functioned effectively as a DPS ever since the DPS provision was added to the Act later in 1978. Under the Act, the Service is authorized to reevaluate that functional DPS listing and revise it to meet the criteria in the DPS policy and to reflect the “best available biological data” (see Western Great Lakes Distinct Population Segment). We are not designating a previously unidentified DPS, but are revising a preexisting listing of *Canis lupus* in Minnesota that functions as a DPS. Our reevaluation of the Minnesota listing demonstrates that a gray wolf DPS including only Minnesota (per the 1978 listing) would not meet the criteria in the DPS policy, because it would not be discrete “\* \* \* in relation to the remainder of the species to which it belongs” (61 FR 4725, February 7, 1996). The Minnesota wolf population has expanded well beyond State boundaries and is connected to the wolf population in Wisconsin and Michigan, as evidenced by frequent movements of wolves among the States (Van Deelen 2009, p. 140; Treves *et al.* 2009, pp. 192–195) and genetic analyses that demonstrate

the Wisconsin and Michigan wolves are mostly from the same genetic mix as Minnesota wolves (Wheeldon and White 2009, p. 4; Fain *et al.* 2010). Therefore, we are delineating the boundaries of the expanded Minnesota population segment to meet the criteria in the DPS policy and to reflect the current geographic location of the population.

Moreover, even if we were identifying a new DPS at this time, we interpret the Act to allow DPSs to be used for both listing and delisting species. Section 4(a)(1) of the Act directs the Secretary of the Interior to determine whether “any species” is endangered or threatened. Numerous sections of the Act refer to adding and removing “species” from the list of threatened or endangered plants and animals. Section 3(16) defines “species” to include any subspecies “and any distinct population segment of any species of vertebrate fish or wildlife.” Therefore, the Act authorizes us to revise the List of Endangered and Threatened Wildlife and Plants to list, reclassify, and delist species, subspecies, and DPSs of vertebrate species. Furthermore, our “Policy Regarding the Recognition of Distinct Vertebrate Population Segments under the Endangered Species Act” states that the policy is intended for “the purposes of listing, delisting, and reclassifying species under the Endangered Species Act \* \* \*.” (61 FR 4722, Feb. 7, 1996), and that it “guides the evaluation of distinct vertebrate population segments for the purposes of listing, delisting, and reclassifying under the Act.” (61 FR 4725).

On December 12, 2008, the Solicitor of the Department of the Interior issued a formal opinion, “U.S. Fish and Wildlife Service Authority Under Section 4(c)(1) of the Endangered Species Act to Revise Lists of Endangered and Threatened Species to ‘Reflect Recent Determinations’” (U.S. DOI 2008). This opinion represents the views of the Department of the Interior and fully supports the Department’s position that it is authorized in a single action to identify a DPS within a larger listed entity, determine that the DPS is neither endangered nor threatened, and then revise the List of Endangered and Threatened Wildlife to reflect those determinations. The opinion also notes that, although the term “delist” is not used in the Act, it is used extensively in the regulations implementing the section 4 listing provisions of the Act, such as 50 CFR 424.11(d). As explained in footnote 8 to the Solicitor’s opinion, “As used by FWS, “delisting” applies broadly to any action that revises the lists either to remove an already-listed

entity from the appropriate list in its entirety, or to reduce the geographic or taxonomic scope of a listing to exclude a group of organisms previously included as part of an already-listed entity.” The complete text of the Solicitor’s formal opinion can be found at <http://www.fws.gov/midwest/wolf/>. Therefore, identification and delisting of a DPS is permissible.

(11) *Comment:* Two commenters stated that, when drawing the boundaries of the DPS, the Service must ensure that all significant portions of the range within the DPS support viable wolf populations. The boundaries should include, at most, core areas in which a population has fully recovered.

*Our Response:* We have analyzed whether the species is threatened or endangered in a significant portion of its range in the WGL DPS (see Is the Species Threatened or Endangered in a Significant Portion of Its Range?). We believe all significant portions of the species’ range within the DPS support viable wolf populations and that the gray wolf has achieved recovery throughout the WGL DPS and is no longer threatened or endangered. Therefore, it should be delisted with management returning to the States and tribes.

We have delineated the DPS to be closely tied to the biological wolf population in the area, and to be consistent with the two relevant court rulings (*Defenders of Wildlife v. Norton*, 354 F. Supp. 2d 1156 (D. Or. 2005); *National Wildlife Federation v. Norton*, 386 F. Supp. 2d 553 (D. Vt. 2005)). Wolf biology makes it unreasonable to define a wolf population, and hence a wolf DPS, as solely the area where wolf packs are present at viable levels. Any area that hosts wolf packs also is producing a substantial number of dispersing wolves, some of which return after short absences, while others travel farther and some never return. Delineation of a wolf population must recognize and account for this dispersal behavior to some degree. We believe our DPS delineation is appropriately based on the biological features of the species and the nature of a wolf population by being centered on the areas occupied by the core population, but also including a surrounding area that encompasses a reasonable portion of the areas visited by core population wolves making longer distance movements from their natal areas. We have included nearby areas that are likely to be visited by wolves that have dispersed from the core recovery areas because we believe these wolves should be considered part of that biological population while they are within a reasonable distance from

the core areas. The areas of potentially suitable habitat that are currently unoccupied are relatively small, and even if occupied in the future, will not make a significant contribution to the long-term viability of the gray wolf population in the DPS or in the United States, and thus are not considered to be a significant portion of the species range.

A critical component of delineating the boundaries of a DPS is gaining an understanding of the population/metapopulation that is being designated as a DPS. Wolf biology clearly shows that temporary and permanent movements beyond the pack’s territory are a key element of wolf population dynamics, and as such, these movements must be considered when delineating a boundary for a DPS. Furthermore, a biologically based DPS boundary cannot follow the edge of the fully occupied core areas, as this comment seems to advocate. Individual wolves would be constantly moving back and forth across such a boundary, and pack territories may form on both sides of the line in some years, and might disappear from one or both sides in subsequent years, depending on a number of physical, biological, and societal factors. We determined that the DPS boundary should recognize and accommodate the normal behavior of the metapopulation members.

(12) *Comment:* A few commenters suggested specific revisions to the DPS boundaries, such as including or not including all of the Dakotas or not including the northern Lower Peninsula of Michigan.

*Our Response:* We considered the best available scientific data on wolf distributions and movements in delineating the boundaries of the Western Great Lakes DPS. We considered several options, among them drawing a tight line around the core Great Lakes wolf population or drawing a very large circle that included the core population as well as all areas visited by known dispersers. In the end, however, we determined that drawing the boundary line to include the core recovered wolf population in the Great Lakes Region, plus a wolf movement zone around the core population that includes areas visited by dispersers known to contribute to the core population, was the most biologically supported alternative. The determination was the result of a thorough review of biological data and the regulatory guidance. Additionally, the delineation of the DPS boundary was supported by the peer-reviewers.

(13) *Comment:* Corridors that allow safe movement of wolves among the

Great Lakes States must be maintained, and the benefits of these corridors must not be undermined by escalated lethal control of wolves.

*Our Response:* Wolves are effective dispersers (Forbes and Boyd 1997), and existing habitat linkages among Minnesota, Wisconsin, Michigan, and Canada allow long-distance movements. Long-distance movements of wolves through human-dominated landscapes in Minnesota and Wisconsin suggest highways and roads are not barriers (Mech *et al.* 1995, p. 368; Merrill and Mech 2000, pp. 429–431). Wolves are capable of traveling through crop and range land (Licht and Fritts 1994, pp. 75, 77; Wydeven *et al.* 1998, pp. 777) and can cross ice-covered lakes and rivers (Mech 1966, accessed at [http://www.cr.nps.gov/history/online\\_books/fauna7/fauna2a.htm](http://www.cr.nps.gov/history/online_books/fauna7/fauna2a.htm), not paginated) and unfrozen rivers during the summer (Van Camp and Gluckie 1979, pp. 236–237).

The Minnesota, Wisconsin, and Michigan State management plans all include maintaining habitat linkages and dispersal corridors as a management component. In Minnesota, most of the occupied wolf range is contiguous; that is, most packs occur adjacent to or very near other packs. In addition, all wolves in Minnesota are connected with the much larger population inhabiting southern Canada (MN DNR 2001, p. 27). The dispersal corridor between Minnesota and Wisconsin (within and immediately to the south of management Zone 4) contains large land areas in public ownership (the Nemadji, St. Croix State Forests, Chongwatana State Forest, and St. Croix State Park) that are contiguous with large areas of county forest land in Wisconsin. Because of the habitat security of the public land base that is adjacent to Wisconsin between the Twin Cities and Duluth, wolf dispersal corridors between Minnesota and Wisconsin are well protected. The MN DNR will work in cooperation with the WI DNR on assessments of the effects of future development on dispersal in the interstate area (MN DNR 2001, p. 2).

The Wisconsin management plan (WI DNR 1999, p. 23) promotes cooperative habitat management with public land management agencies, industrial forests, and other private landowners, including protection of dispersal corridors on private, tribal, and public land to promote continued wolf movement to and from Michigan and Minnesota, as well as among Wisconsin packs. Furthermore, the Plan states that protection of corridor habitat should be a factor in considering acquisition of public land for other conservation purposes.

The MI management plan recognized the importance of continued movement of wolves within and among the states and Canada to help ensure the long-term viability of the wolf population. As a component of their management plan, the MI DNR will cooperate with Federal, State and tribal agencies and private landowners to identify and protect wolf habitat linkage zones (MI DNR 2008, pp. 39–40). The wolf management plans currently in place for Minnesota, Wisconsin, and Michigan will be more than sufficient to retain viable wolf populations in each State. These State plans provide a very high level of assurance that wolf populations in these three States will not decline to nonviable levels in the foreseeable future.

(14) *Comment:* Several commenters stated that the Service must ensure that State wolf management strategies accommodate tribal interests within reservation boundaries as well as honor the tribal role and authority in wolf management in the ceded territories. Furthermore, the Federal trust responsibility, as it pertains to wolf management, must be continued after delisting.

*Our Response:* The Service and the Department of the Interior recognize the unique status of federally recognized tribes, their right to self-governance, and their inherent sovereign powers over their members and territory. The Department, the Service, the Bureau of Indian Affairs (BIA), and other Federal agencies, as appropriate, will take the needed steps to ensure that tribal authority and sovereignty within reservation boundaries are respected as the States implement their wolf management plans and revise those plans in the future. Furthermore, there may be tribal activities or interests associated with the wolf encompassed within the tribes' retained rights to hunt, fish, and gather in treaty-ceded territories. The Department is available to assist in the exercise of those rights. If biological assistance is needed, the Service may provide it via our field offices. The Service will remain involved in the post-delisting monitoring of the gray wolf, but all Service management and protection authority under the Act will end with this delisting. Legal assistance may be provided to the tribes by the Department of the Interior, and the BIA will be involved, when needed.

(15) *Comment:* One commenter stated that the delisting process has highlighted the need for improved relationships between Tribes and the Service on wolf management issues. Several issues were highlighted: (a) The

proposed rule states that “Tribal representatives declined to participate” in the development of a wolf management strategy for the lower 48 States. In fact, most Tribes in the country were given no opportunity to participate in this process, and the few intertribal organizations that had any opportunity were invited only after the process was already under way. (b) Many of the references to tribal management perspectives used in the proposal were 8–13 years old, disregarding the fact that tribal perspectives may change over time, possibly misrepresenting current tribal positions. (c) The section that discusses the Service’s government-to-government relationship with the Tribes notes that the Service will “fully consider all of the comments on the proposed rule that are submitted by Tribes and Tribal members during the public comment period,” reflecting again the Service’s failure to correctly recognize the proper nature of the Service-Tribal relationship.

*Our Response:* As discussed in the proposed rule, the Service embarked on a structured decisionmaking process in 2008 as a means of developing a more integrated and comprehensive strategy for gray wolf conservation in the lower 48 States and Mexico. The overall intent of the process was to identify appropriate wolf entities (*i.e.*, listing units) for full status review, anticipating that such review would lead to either confirmation or revision of the existing gray wolf listing. We first conducted several iterations of the process in an internal Service effort to develop a viable framework for considering the scientific and policy questions that drive decisionmaking for wolves. Following our development of a satisfactory decisionmaking framework, we convened a workshop in August 2010 to generate and assess alternative taxonomic and population units at various scales and in various configurations, including the 1978 listing as the *status quo* alternative. The outcomes from the workshop provided input to our continuing effort to formulate a comprehensive vision of wolf conservation, which evolved into the proposed national wolf strategy discussed in the proposal. This strategy was a broad outline, the components of which are in various stages of execution. The process used to develop the proposed national wolf strategy evolved as we proceeded through our task, and different parties were engaged at different times.

Although the Midwest Tribes and Inter-Tribal Natural Resource Management Agencies were not

participants at the August 2010 workshop, we worked hard to involve them in developing a proposal that was specific to the Midwest area. In doing so, to make sure that our proposal appropriately reflected the current status of Tribal wolf management activities, we contacted each Tribe in the Service's Midwest Region that we knew to be involved in wolf management activities in order to clarify their management efforts to date and the status of any Tribal wolf management plans. We hold our government-to-government relationship with Tribes in very high regard and respect Tribal sovereignty. Accordingly, all of the comments received from Tribes and Inter-Tribal Natural Resource Management Agencies in response to the proposed rule were considered in the final rule. In addition, during the comment period, we met with the Chippewa Ottawa Resources Authority Board and the Great Lakes Indian Fish and Wildlife Commission's Voigt Inter-Tribal Task Force to discuss the proposal. We also offered to meet individually with and discuss the proposal with any Tribe that wanted to do so, however none accepted our offer.

(16) *Comment:* Post-delisting monitoring is critical and should extend beyond the typical 5-year period. Public harvest will likely take 3–5 years to implement, and this is the variable most likely to affect wolf populations. This variable cannot be adequately evaluated within the 5-year PDM period.

*Our Response:* The Service will implement the PDM plan for at least 5 years after delisting the WGL DPS. During the monitoring period, if the Service detects a change in wolf populations or a significant increase in threats, it can evaluate and change monitoring methods or consider relisting. At the end of the PDM period the Service will conduct a final internal review and may request reviews by the former members of the Eastern Gray Wolf Recovery Team and other independent specialists, as appropriate. If the final internal review indicates that substantive changes have been made to how wolves are managed, we may extend the monitoring period to evaluate potential impacts. Based on those final reviews, which will be posted on the Service's Internet site, the Service will decide whether to relist, extend the monitoring period, or end monitoring.

(17) *Comment:* One peer reviewer stated that the recent scientific literature contains a few additional pertinent papers on gray wolf diseases and parasites. She noted that those papers are in agreement with the discussion

points and conclusions in the proposed rule (pp. 26112–26114).

*Our Response:* We have incorporated information from those recent scientific papers into our analysis of disease as a potential threat (see the discussion under C. Disease or Predation). That information does not alter our determination that diseases are not likely to affect the viability of wolves or put wolves in the WGL at risk.

(18) *Comment:* Several commenters expressed concern regarding whether the States would implement a public harvest or recreational hunting after wolves are federally delisted. Others commented that they support a public harvest or recreational hunting. A number provided suggestions on how or specifically where such a public harvest should be implemented, if it is.

*Our Response:* Unregulated killing was the primary threat to the species historically. The State management plans that will be implemented after delisting provide protection from unregulated killing. It is not the Service's position to decide whether a regulated harvest in and of itself is an appropriate management tool. Instead the Service is concerned with whether the use of that tool might reduce the number of wolves in such a way that they would again be considered a threatened or endangered species under the Act. A regulated harvest of wolves can be carried out in a manner that would not threaten their continued existence.

(19) *Comment:* A couple of commenters stated that the recovery criteria have not been achieved because either the wolf population data are wrong, or because the Wisconsin-Michigan wolf population is not a second population as is required by the recovery criteria found in the 1992 Recovery Plan.

*Our Response:* We are fully satisfied that the wolf population estimates provided by the Minnesota, Wisconsin, and Michigan DNRs demonstrate that the numerical recovery criteria have been achieved for far longer than the 5 years recommended in the Federal Recovery Plan. The methods used by WI and MI DNRs result in a conservative count of the wolves that are alive at the late-winter annual low point of the wolf population. The method used by the Minnesota DNR for its much larger wolf population is less precise, but even the lower bound of its 90 percent confidence interval (CI) exceeded the Federal Recovery Plan's Minnesota goal of 1,250–1,440 wolves back as far as the 1988–89 survey (Fuller *et al.* 1992, p. 50) and the CI lower bound has been well above that goal since then (Erb and

Benson 2004, Table 1). Therefore, we see no problem with using these Minnesota population estimates. Members of the Recovery Team have also expressed confidence in the population estimates of all three States (Peterson in litt. 1999a, in litt. 1999b).

The 1992 Federal Recovery Plan describes two scenarios that would satisfy its goal for a second viable wolf population. One scenario deals with the development of an isolated wolf population; such a population must be composed of at least 200 wolves over five successive years. The second scenario is a population that is located within 100 miles of another viable wolf population; such a population must consist of only 100 wolves for five consecutive years (USFWS 1992, pp. 25–26). The Recovery Plan discusses the conservation tradeoffs of completely separate populations versus adjacent populations, and it specifically states that a wolf population larger than 100 wolves “closely tied to the Minnesota population” will be considered a viable population despite its small size, because of immigration of wolves from Minnesota (USFWS 1992, pp. 24–25). Although this Recovery Plan was written prior to the common acceptance and use of the conservation biology term “metapopulation,” this clearly was the concept being discussed and advocated in the Federal Recovery Plan. The second scenario describes what has occurred in the WGL DPS, and, therefore, the wolves in Wisconsin and Michigan qualify as a second population (see Recovery Criteria for a full discussion).

(20) *Comment:* Delisting in the WGL will prevent wolves from further expanding into areas of their previous range. The Service cannot delist wolves in one portion of their range when the species remains endangered throughout the remainder of its historical range, and where viable habitat for the species exists such that further recovery within its historical range can be promoted.

*Our Response:* Delisting the Western Great Lakes DPS does not discourage wolf conservation in other parts of their range. The Act defines “conservation” as “the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.” 16 U.S.C. 1532(3). The States, tribes, and conservation groups have all played a key role in the recovery of the WGL wolf population and now, because the wolf population is recovered and healthy, continued conservation efforts under the Act are no longer necessary within

the DPS. The assertion that delisting the WGL DPS is inconsistent with the Act's conservation requirement is based on an apparent confusion of the term "conservation" with "restoration." A species is conserved when it no longer meets the Act's definitions of endangered species or threatened species and, at such time, the species should be delisted. This does not require the range-wide restoration of the gray wolf to all areas that it historically inhabited before it may be delisted in the WGL region—an area that is inhabited by a healthy, recovered wolf population.

Because this final rule does not alter the listing status of wolves under the Act outside of the DPS, it does not hinder the Service's or States' ability to implement reintroduction and recovery programs in other areas of the country. The commenters' focus on the alleged inability of wolves within the DPS to disperse to other areas is misdirected because it takes an overly narrow view of wolf recovery possibilities. This final rule in itself does not foreclose further wolf recovery in other areas of suitable habitat via reintroduction programs. Indeed, gray wolf populations in Wyoming, central Idaho, and the southwestern United States did not develop from dispersers, but from wolf reintroductions that were planned and carried out by the Service and partner agencies and organizations. Continued wolf recovery in areas outside of the Western Great Lakes DPS is not prevented by delisting the Western Great Lakes DPS.

(21) *Comment:* Numerous commenters indicated that our delisting proposal was based on unspecified political considerations, pressure from the livestock industry, exaggerated fears for human safety, pressure from deer/bear hunters and furbearer trappers, and pressure from States. We were asked by other commenters to consider the value of wolves for keeping deer numbers in check, to maintaining healthy ungulate populations, for maintaining native vegetation and other species of wildlife, and in balancing nature. Others thought we should consider the economic benefits provided by a large wolf population. We also received numerous comments indicating that wolves should be delisted because of fear for public safety, increased wolf-human conflicts, reduced funding to control depredating wolves, and/or decreasing public tolerance for wolves.

*Our Response:* The Act requires that listing and delisting decisions be based entirely on whether a species is endangered or threatened due to one or more categories of threats (section

4(a)(1)) and that we make this determination "solely on the basis of the best scientific and commercial data available." In compliance with the Act, the other nonscientific considerations and factors described above have not been used in making this decision. The WGL gray wolf DPS no longer meets the definition of a threatened or endangered species, and has achieved the recovery criteria established in the Eastern Timber Wolf Recovery Plan (Service 1992) by greatly expanding in numbers and geographic range, and threats to its long long-term viability have been reduced or eliminated.

(22) *Comment:* Several comments recommended that specific changes be made to the three State wolf management plans or that the State management plans are not "protective enough" of wolves.

*Our Response:* We have reviewed the 2001 Minnesota Plan, the 1999 and 2006 Updated Wisconsin Plan, and the 1997 and 2008 revised Michigan Plan. We reviewed these plans to determine if they will provide sufficient protection and reduce threats. We are primarily concerned with the outcome of the plan's implementation. Once a species is delisted, the details of its management are a State or tribal responsibility; the Federal responsibility is to monitor the plan's implementation and the species' response for at least 5 years to ensure that the plan's outcome is as expected. We have concluded that each plan provides adequate protection for wolves, and will keep threats at a sufficiently low level, so that the WGL DPS wolves will not become threatened or endangered in the foreseeable future. Suggestions for changes to the State wolf management plans should be directed to the respective State management agency for consideration.

(23) *Comment:* Several comments expressed distrust for State wolf protection, based on past State programs aimed at wolf eradication.

*Our Response:* We acknowledge the past involvement of State and Federal government agencies in intensive, and largely successful, programs to eradicate wolves. However, we believe that public sentiment and agency mandates have changed dramatically since the 1960s and earlier (see Public Attitudes Toward the Wolf). While wolf eradication might still be the wish of a small number of individuals, we believe there is broad support among the public and within governmental agencies to allow wolves to occupy our landscape, with some degree of management imposed to maintain control of the level of wolf-human conflicts. Based on existing State laws and State management plans, we

will rely on the States to provide sufficient protection to wolves until and unless it is shown they are unwilling or unable to do so.

(24) *Comment:* The delisting decision is based on the assumption that the State wolf management plans will be fully implemented and funded after Federal delisting.

*Our Response:* We are required to evaluate the likely future threats that a delisted wolf population will experience. We rely heavily on the State wolf management plans for our assessment of the degree of protection and monitoring that will occur after Federal delisting. Because these plans have received the necessary approvals within the State governments, we believe it is reasonable to assume the plans will be funded and implemented largely as written. Wisconsin and Michigan DNRs have led the efforts to restore wolves to their States for several decades. Based on their proven leadership in Midwest wolf recovery, we see no reason to doubt the continuing commitment of these State agencies to wolf conservation.

We recognize that State wolf plans can be changed by the respective DNR or State legislature, creating some uncertainty regarding plan implementation. However, given the high public visibility of wolf management, the extent of public interest and involvement in the development and updating of the States' plans, the vast amount of scientific data available regarding wolf management, and the status monitoring that we will be maintaining for the next 5 years, we believe it is reasonable and proper to assume that the three State wolf plans will not be significantly changed, nor will their implementation be critically underfunded, in a manner that would jeopardize the viability of any State's wolf population. If this assumption turns out to be incorrect, we have the ability to extend the monitoring period or relist the species, including an emergency relisting, if necessary.

(25) *Comment:* Human-caused mortality poses too high a risk to delist the wolf. The wolf cannot be delisted "until this threat has been adequately controlled."

*Our Response:* Our detailed review of the past, current, and likely future threats to wolves within the WGL DPS identified human-caused mortality of all forms to constitute the majority of documented wolf deaths. However, the wolf populations in Wisconsin and Michigan have continued to expand in numbers and the Minnesota wolf population is at least maintaining itself at well over the population goal

recommended in the 1992 Recovery Plan and at about twice the minimum level established in the 2001 Minnesota Wolf Plan. Healthy wolf populations clearly can withstand a high level of mortality, from human and other causes, and remain viable. Although the commenters do not provide any clarification on what is meant by “adequately controlled” we believe that, for purposes of this delisting decision, the numerical growth and range expansion shown by WGL DPS wolves indicate that “adequate control” already exists since the species is being maintained at healthy levels.

#### Summary of Changes From Proposed Rule

In this final rule, we make two substantive changes from the proposal. First, we are separating our determination on the delisting of the Western Great Lakes DPS from the determination on our proposal regarding all or portions of the 29 States we considered to be outside the historical range of the gray wolf. This rule finalizes our determination for the WGL DPS. A subsequent decision will be made for the rest of the eastern United States.

In this final rule, we also amend our taxonomic interpretation of wolves in the WGL. In the proposed rule, we presented and proposed to recognize recent taxonomic information indicating that the gray wolf subspecies *Canis lupus lycaon* should be elevated to the full species *C. lycaon*. We believed the best available scientific information supported recognition of the eastern wolf, *C. lycaon*, as a species and that this species had intercrossed with *C. lupus* in the western Great Lakes region to constitute a population composed of *C. lupus*, *C. lycaon*, and their hybrids.

During the public comment period on the proposal, we received comments from diverse interest groups and individuals (including scientific researchers, State natural resource agencies, sportsmen’s groups, cattlemen’s groups, and conservation groups) highlighting the ongoing debate regarding the taxonomy of North American wolves. Some of those commenters questioned the position that *C. lycaon* be recognized as a species (rather than a subspecies); others stated that, in light of ongoing research and recent papers that present varying taxonomic alternatives, it is premature to accept *C. lycaon* as a separate species. To allow for further consideration of the taxonomy issue, on August 26, 2011, we reopened the public comment period on the proposal to allow for additional public review and comment specifically

on the recognition of *C. lycaon* as a separate species. At that time we made available to the public a manuscript prepared by Service employees that is currently undergoing review for publication (Chambers *et al.*, in prep.). The manuscript provides a review of the available scientific literature to assess the taxonomic standing of wolves in North America. Our recognition of *C. lycaon* as a separate species in the proposal was, in part, based on information summarized in that manuscript. During the reopened public comment period, we again received numerous comments focused on taxonomy.

Many of the comments we received during both comment periods came from leading researchers in the field of canid biology and genetics, including many of the scientists responsible for the research upon which we based the decision in our proposal. Many of the scientists who commented regarding taxonomy during the first comment period submitted additional comments after reviewing the Chambers *et al.* (in prep.) manuscript. Several recent publications on the subject were also submitted (e.g., Mech 2011, Mech *et al.* in press, vonHoldt *et al.* 2011).

One particular comment letter was signed by eight leading researchers in this field (Weeldon *et al.* in litt. 2011), many of whom also submitted individual comments on the proposal. In that letter they acknowledge their differing views on wolf taxonomy, yet express that they all disagree with the Service’s conclusion in the proposal that two separate species of wolves inhabit the WGL. Those scientists state that research and data collection regarding whether two separate species of wolves inhabit the WGL and whether gray wolves (*Canis lupus*) historically occupied portions of the eastern United States is ongoing, and that such research will continue to elucidate the taxonomic history of wolves in North America.

L. David Mech, preeminent wolf researcher and peer reviewer for the proposal, submitted comments stating that the proposal to delist wolves in the WGL is well supported by the data, except for the data regarding taxonomy (Mech in litt. 2011). He states: “Although it is true that at the writing of the proposed rule, it seemed like considerable evidence had accumulated supporting the existence of the separate species, *Canis lycaon*, or the eastern wolf, the vonHoldt *et al.* (2011) article published since adds enough doubt as to question that proposition. At the least, the vonHoldt *et al.* (2011) article evinces that there is not consensus by the pertinent scientific community

about the existence of *C. lycaon* and therefore about the original range of *C. lupus*.”

The Service also received a number of comments from conservation groups that, while supporting the delisting of wolves in the WGL, asserted that the Service’s proposal to recognize *C. lycaon* as a full species was not supported by the best available science. The Natural Resources Defense Council (in litt. 2011) cite that “the Service’s decision to recognize a separate species of wolf, *C. lycaon*, in this region is not supported by the best available science” and “while the issue of wolf taxonomy has long been debated, the existence of an eastern wolf, *C. lycaon*, as a separate species is not fully supported by the scientific community. Additionally, the taxonomy of wolves in this region is the subject of current and active research. As such, it is premature to declare the existence of *C. lycaon* as a distinct species.” Defenders of Wildlife (in litt. 2011) state that “a definitive conclusion cannot be made [regarding the taxonomic status of the eastern wolf] at this time.” The National Wildlife Federation (in litt. 2011) asserts that “given the significant taxonomic debate that is currently underway among respected scientists” and “because the scientific community remains unsettled, the taxonomic revision proposed in this rule is premature.”

The State natural resource agencies in the WGL also expressed that the debate regarding wolf taxonomy is unsettled. The MN DNR (in litt. 2011) states “several competing theories exist surrounding the ongoing controversy over wolf taxonomy in the Great Lakes region. There is no general consensus regarding these theories, and \* \* \* it will continue to be of great debate in the scientific community.” They further contend that vonHoldt *et al.* (2011) “which contradicts other recent reports, exemplifies the limitations of drawing final conclusions from the relatively new, rapidly evolving, and competing theories from the science of molecular genetics. We recognize the ongoing controversy over wolf taxonomy in the western Great Lakes region and suggest that the Service has prematurely accepted only one of several competing alternatives to the taxonomic classification of wolves.” The WI DNR (Stepp in litt. 2011) asserts that “scientists continue to disagree whether the eastern wolf is a separate species from gray wolves” while the MI DNR (in litt. 2011) states “we recognize that the science regarding which species of wolves occur in the Western Great Lakes is not settled, but we also recognize that wolf conservation cannot be put on hold



until every scientific question has a consensus answer.”

Numerous other groups also commented on the issue of recognizing *C. lycaon* as a separate species. Safari Club International (in litt. 2011) states “as is evidenced by the myriad comments offered by experts in wolf biology and taxonomy that are either published in the scientific literature or were submitted in response to the previous comment opportunity, the question of a separate taxonomic species classification for a new species of wolves in the Western Great Lakes (WGL) is highly disputed and controversial at best.” Both the Sierra Club (in litt. 2011) and the Michigan Environmental Council (in litt. 2011) declare that “there is still a significant lack of clarity within the scientific community regarding the existence of *Canis lycaon*” while the Center for Biological Diversity (in litt. 2011) states “the evidence shows that declaring the eastern wolf a distinct species is not supported by the best available science.” The Society for Conservation Biology (in litt. 2011) contends that “the proposed rule’s use of *Canis lycaon* to designate wolves in the northeastern United States is inconsistent with currently recognized scientific nomenclature” and “given this continued scientific controversy.” \* \* \* The Humane Society of the United States (in litt. 2011) asserts that the Service’s proposal “is based on unsettled science with respect to the recognition of a new species of wolf, the eastern wolf” and the Service’s conclusion regarding the eastern wolf “is a matter of continuing scientific debate.”

The extensive information submitted during the comment periods and recent publications on the subject and the widely diverging views expressed in the pertinent scientific studies underscore the enduring debate regarding the taxonomy of North American wolves—a debate that may not be resolved for some time (see Wolf Taxonomy in the Western Great Lakes Region for a full discussion). Although there is not a significant number of new publications that have become available since we published our proposal in May 2011, the substance of those new publications and the substantive comments we received have led us to reconsider our proposed decision.

Based on a reevaluation of the available scientific information and the evolving and ongoing scientific debate, we reconsidered our position, as expressed in the proposed rule (76 FR 26086), that the gray wolf subspecies *Canis lupus lycaon* should be elevated

to the full species *Canis lycaon* and that the population of wolves in the WGL is a mix of the two full species, *Canis lupus* and *Canis lycaon*. While there are varying scientific opinions on the taxonomic history of North American wolves, for a long time and throughout this technical debate, *Canis lupus* is the species that has been recognized in the WGL, and there is significant information indicating that continuing to recognize *C. lupus* as the species in the WGL is appropriate (see Wolf Taxonomy in the Western Great Lakes Region). Having reviewed and assessed all of the available scientific information, including, in particular, the comments received on the proposed rule and the information that has become available since the proposed rule was published, we have decided the better conclusion to draw at this time is our previous taxonomic recognition that all wolves in the WGL area are gray wolves (*Canis lupus*). Therefore, in this final rule we consider all wolves in the WGL DPS to be gray wolves (*Canis lupus*) and are delisting them as such.

#### Summary of Factors Affecting the Species

Section 4 of the Act and its implementing regulations (50 CFR part 424) set forth the procedures for listing species, reclassifying species, or removing species from listed status. “Species” is defined by the Act as including any species or subspecies of fish or wildlife or plants, and any distinct vertebrate population segment of fish or wildlife that interbreeds when mature (16 U.S.C. 1532(16)). Once the “species” is identified, we then evaluate whether that species may be endangered or threatened because of one or more of the five factors described in section 4(a)(1) of the Act. We must consider these same five factors in delisting a species. We may delist a species according to 50 CFR 424.11(d) if the best available scientific and commercial data indicate that the species is neither endangered nor threatened because (1) the species is extinct, (2) the species has recovered and is no longer endangered or threatened, or (3) the original scientific data used at the time the species was classified were in error.

A recovered species is one that no longer meets the Act’s definition of threatened or endangered. The analysis for a delisting due to recovery must be based on the five factors outlined in section 4(a)(1) of the Act. This analysis must include an evaluation of threats that existed at the time of listing, those that currently exist, and those that could

potentially affect the species once the protections of the Act are removed.

In the context of the Act, the term “threatened species” means any species or subspecies or, for vertebrates, Distinct Population Segment (DPS) that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The term “endangered species” means any species that is in danger of extinction throughout all or a significant portion of its range. The Act does not define the term “foreseeable future.” For the purpose of this rule, we define the “foreseeable future” to be the extent to which, given the amount and substance of available data, we can anticipate events or effects, or reliably extrapolate threat trends that relate to the status of the WGL DPS.

It took a considerable length of time for public attitudes and regulations to result in a social climate that promoted and allowed for wolf recovery in the WGL DPS. The length of time over which this shift occurred, and the ensuing stability in those attitudes, gives us confidence that this social climate will persist. Also, the States have had a solid history of cooperating and assisting in wolf recovery and have made a commitment, through legislative actions, to continue these activities. We believe this commitment will continue. When evaluating the available information, with respect to foreseeable future, we take into account reduced confidence as we forecast further into the future.

#### A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

A common misconception is that wolves inhabit only remote pristine forests or mountainous areas, where human developments and other activities have produced negligible change to the natural landscape. Their extirpation south of Canada and Alaska, except for the heavily forested portions of northeastern Minnesota, reinforced this popular belief. However, the primary reason wolves survived in those areas was not because of habitat conditions, but, rather, because remote areas were sufficiently free of the human persecution that elsewhere killed wolves faster than the species could reproduce (Mech 1995a, p. 271).

In the western Great Lakes region, wolves in the densely forested northeastern corner of Minnesota have expanded into the more agricultural portions of central and northwestern Minnesota, northern and central Wisconsin, and the entire UP of Michigan. Habitats currently being used

by wolves span the broad range from the mixed hardwood-coniferous forest wilderness area of northern Minnesota, through sparsely settled but similar habitats in Michigan's UP and northern Wisconsin, and into more intensively cultivated and livestock-producing portions of central and northwestern Minnesota and central Wisconsin.

Wolf research and the expansion of wolf range over the last three decades have shown that wolves can successfully occupy a wide range of habitats, and they are not dependent on wilderness areas for their survival. In the past, for instance, wolf populations occupied nearly every type of habitat north of mid-Mexico that contained large ungulate prey species, including bison, elk, white-tailed deer, mule deer, moose, and woodland caribou; thus, wolves historically occupied the entire Midwest. Inadequate prey density or high levels of human-caused mortality appear to be the only factors that limit wolf distribution (Mech 1995a, p. 271; 1995b, p. 544).

#### *Suitable Habitat Within the Western Great Lakes DPS*

Various researchers have investigated habitat suitability for wolves in the central and eastern portions of the United States. In recent years, most of these efforts have focused on using a combination of human density, density of agricultural lands, deer density or deer biomass, and road density, or have used road density alone to identify areas where wolf populations are likely to persist or become established (Mladenoff *et al.* 1995, pp. 284–285; 1997, pp. 23–27; 1998, pp. 1–8, 1999; pp. 39–43; Harrison and Chapin 1997, p. 3; 1998, p. 769–770; Wydeven *et al.* 2001a, pp. 110–113; Erb and Benson 2004, p. 2; Potvin *et al.* 2005, pp. 1661–1668; Mladenoff *et al.* 2009, pp. 132–135).

To a large extent, road density has been adopted as the best predictor of habitat suitability in the Midwest due to the connection between roads and human-related wolf mortality. Several studies demonstrated that wolves generally did not maintain breeding packs in areas with a road density greater than about 0.9 to 1.1 linear miles per sq mi (0.6 to 0.7 km per sq km) (Thiel 1985, pp. 404–406; Jensen *et al.* 1986, pp. 364–366; Mech *et al.* 1988, pp. 85–87; Fuller *et al.* 1992, pp. 48–51). Work by Mladenoff and associates indicated that colonizing wolves in Wisconsin preferred areas where road densities were less than 0.7 mi per sq mi (0.45 km per sq km) (Mladenoff *et al.* 1995, p. 289). However, recent work in the UP of Michigan indicates that, in

some areas with low road densities, low deer density appears to limit wolf occupancy (Potvin *et al.* 2005, pp. 1667–1668) and may prevent recolonization of portions of the UP. In Minnesota, a combination of road density and human density is used by MN DNR to model suitable habitat. Areas with a human density up to 8 people per sq km are suitable if they also have a road density less than 0.5 km per sq km. Areas with a human density of less than 4 people per sq km are suitable if they have road densities up to 0.7 km per sq km (Erb and Benson 2004, Table 1).

Road density is a useful parameter because it is easily measured and mapped, and because it correlates directly and indirectly with various forms of other human-related wolf mortality factors. A rural area with more roads generally has a greater human density, more vehicular traffic, greater access by hunters and trappers, more farms and residences, and more domestic animals. As a result, there is a greater likelihood that wolves in such an area will encounter humans, domestic animals, and various human activities. These encounters may result in wolves being hit by motor vehicles, being controlled by government agents after becoming involved in depredations on domestic animals, being shot intentionally by unauthorized individuals, being trapped or shot accidentally, or contracting diseases from domestic dogs (Mech *et al.* 1988, pp. 86–87; Mech and Goyal 1993, p. 332; Mladenoff *et al.* 1995, pp. 282, 291). Based on mortality data from radio-collared Wisconsin wolves from 1979 to 1999, natural causes of death predominate (57 percent of mortalities) in areas with road densities below 1.35 mi per sq mi (0.84 km per sq km), but human-related factors produced 71 percent of the wolf deaths in areas with higher road densities (Wydeven *et al.* 2001a, pp. 112–113).

Some researchers have used a road density of 1 mi per sq mi (0.6 km per sq km) of land area as an upper threshold for suitable wolf habitat. However, the common practice in more recent studies is to use road density to predict probabilities of persistent wolf pack presence in an area. Areas with road densities less than 0.7 mi per sq mi (0.45 km per sq km) are estimated to have a greater than 50 percent probability of wolf pack colonization and persistent presence, and areas where road density exceeded 1 mi per sq mi (0.6 km per sq km) have less than a 10 percent probability of occupancy (Mladenoff *et al.* 1995, pp. 288–289; Mladenoff and Sickley 1998, p. 5;

Mladenoff *et al.* 1999, pp. 40–41).

Wisconsin researchers view areas with greater than 50 percent probability as “primary wolf habitat,” areas with 10 to 50 percent probability as “secondary wolf habitat,” and areas with less than 10 percent probability as unsuitable habitat (WI DNR 1997, pp. 47–48).

The territories of packs that do occur in areas of high road density, and hence with low expected probabilities of occupancy, are generally near broad areas of more suitable habitat that are likely serving as a source of wolves, thereby assisting in maintaining wolf presence in the higher road density and, therefore, less-suitable areas (Mech 1989, pp. 387–388; Wydeven *et al.* 2001a, p. 112). The predictive ability of this model was questioned (Mech 2006a, 2006b) and responded to (Mladenoff *et al.* 2006), and an updated analysis of Wisconsin pack locations and habitat has been completed (Mladenoff *et al.* 2009). This new model maintains that road density is still an important indicator of suitable wolf habitat; however, lack of agricultural land is also a strong predictor of habitat wolves occupy.

It appears that essentially all suitable habitat in Minnesota is now occupied, range expansion has slowed or possibly ceased, and the wolf population within the State has stabilized (Erb and Benson 2004, p. 7; Erb and Don Carlos 2009, pp. 57, 60). This suitable habitat closely matches the areas designated as Wolf Management Zones 1 through 4 in the Revised Recovery Plan (USFWS 1992, p. 72), which are identical in area to Minnesota Wolf Management Zone A (see Figure 2, below; MN DNR 2001, Appendix III).

Recent surveys for Wisconsin wolves and wolf packs show that wolves have now recolonized the areas predicted by habitat models to have low, moderate, and high probability of occupancy (primary and secondary wolf habitat). The late-winter 2008–09 Wisconsin wolf survey identified packs occurring throughout the central Wisconsin forest area (Wolf Management Zone 2, Figure 3) and across the northern forest zone (Zone 1, Figure 3), with highest pack densities in the northwest and north-central forest; pack densities are lower, but increasing, in the northeastern corner of the State (Wydeven and Wiedenhoft 2009, Figure 1).

Michigan wolf surveys in winter 2009–2010 continue to show wolf pairs or packs (defined by Michigan DNR as two or more wolves traveling together) in every UP county except Keweenaw County (Huntzinger *et al.* 2005, p. 6; Roell 2011, pers. comm.), which probably lacks a suitable ungulate prey

base during winter months (Potvin *et al.* 2005, p. 1665).

Habitat suitability studies in the Upper Midwest indicate that the only large areas of suitable or potentially suitable habitat areas that are currently unoccupied by wolves are located in the northern LP of Michigan (Mladenoff *et al.* 1997, p. 23; Mladenoff *et al.* 1999, p. 39; Potvin 2003, pp. 44–45; Gehring and Potter 2005, p. 1239). One published Michigan study (Gehring and Potter 2005, p. 1239) estimates that these areas could host 46 to 89 wolves; a graduate thesis estimates that 110–480 wolves could exist in the northern LP (Potvin 2003, p. 39). The northern LP is separated from the UP by the Straits of Mackinac, whose 4-mile (6.4-km) width freezes during mid- and late-winter in some years. In recent years there have been several documented occurrences of wolves in the northern LP, but until 2010, there had been no indication of persistence beyond several months. Prior to those occurrences, the last recorded wolf in the LP was in 1910.

In the first instance a radio-collared female wolf from the eastern UP was trapped and killed by a coyote trapper in Presque Isle County in late October 2004. In late November 2004, tracks from two wolves were verified in the same northern LP county. Follow-up winter surveys by the DNR in early 2005 failed to find additional wolf tracks in the northern LP (Huntzinger *et al.* 2005, p. 7); additional surveys conducted in 2006–10 also failed to find evidence of continued northern LP wolf presence (Roell *et al.* 2009, p. 5; Roell 2010, pers. comm.). A video of a single wolf was taken near Mackinac City in Cheboygan County in May 2009, and another trail-camera video-recorded a wolf in Presque Isle County in July 2009. These two sightings may have been the same animal (Roell 2009, pers. comm.). In 2010, USDA Wildlife Services and MI DNR staff confirmed a single breeding pair with pups in Cheboygan County in the northern LP (MI DNR 2010).

These northern LP patches of potentially suitable habitat contain a great deal of private land, are small in comparison to the occupied habitat on the UP and in Minnesota and Wisconsin, and are intermixed with agricultural and higher road density areas (Gehring and Potter 2005, p. 1240). Therefore, continuing wolf immigration from the UP may be necessary to maintain a future northern LP population. The Gehring and Potter study (2005, p. 1239) predicted 850 sq mi (2,198 sq km) of suitable habitat (areas with greater than a 50 percent probability of wolf occupancy) in the northern LP. Potvin (2003, p. 21), using

deer density in addition to road density, believes there are about 3,090 sq mi (8,000 sq km) of suitable habitat in the northern LP. Gehring and Potter (2005, p. 1239) exclude from their calculations those northern LP low-road-density patches that are less than 19 sq mi (50 sq km), while Potvin (2003, pp. 10–15) does not limit habitat patch size in his calculations. Both of these area estimates are well below the minimum area described in the Revised Recovery Plan, which states that 10,000 sq mi (25,600 sq km) of contiguous suitable habitat is needed for a viable isolated gray wolf population, and half that area (5,000 sq mi or 12,800 sq km) is needed to maintain a viable wolf population that is subject to wolf immigration from a nearby population (USFWS 1992, pp. 25–26).

Based on the above-described studies and the guidance of the 1992 Revised Recovery Plan, the Service has concluded that suitable habitat for wolves in the WGL DPS can be determined by considering four factors: road density, human density, prey base, and size. An adequate prey base is an absolute requirement, but in much of the WGL DPS the white-tailed deer density is well above adequate levels, causing the other factors to become the determinants of suitable habitat. Prey base is primarily of concern in the UP where severe winter conditions cause deer to move away from some lakeshore areas, making otherwise suitable areas locally and seasonally unsuitable. Road density and human density frequently are highly correlated; therefore, road density is the best single predictor of habitat suitability. However, areas with higher road density may still be suitable if the human density is very low, so a consideration of both factors is sometimes useful (Erb and Benson 2004, p. 2). Finally, although the territory of individual wolf packs can be relatively small, packs are not likely to persist as a viable population if they occupy a small isolated island of otherwise unsuitable habitat.

Based on the information discussed above, we conclude that Minnesota Wolf Management Zone A (Federal Wolf Management Zones 1–4, Figure 2), Wisconsin Wolf Zones 1 and 2 (Figure 3), and the UP of Michigan contain a sufficient amount of suitable wolf habitat. The other areas within the DPS are unsuitable habitat, or are potentially habitat that is too small or too fragmented to be suitable for maintaining a viable wolf population.

#### *Wolf Populations on Federal Lands*

National forests, and the prey species found in their various habitats, have

been important to wolf conservation and recovery in the core areas of the WGL DPS. There are five national forests in Minnesota, Wisconsin, and Michigan (Superior, Chippewa, Chequamegon-Nicolet, Ottawa, and Hiawatha National Forests) with wolf packs that exclusively or partially reside on them. Their wolf populations range from approximately 484 on the Superior National Forest in northeastern Minnesota, to an estimated 182 on the UP's Ottawa National Forest, 164 on the Chequamegon-Nicolet National Forest in northeastern Wisconsin, and another estimated 49 on the Hiawatha National Forest in the eastern UP (Delphuey 2009, pers. comm.; Eklund 2009, pers. comm.; Roell 2011, pers. comm., Wydeven 2011, pers. comm.).

Voyageurs National Park, along Minnesota's northern border, has a land base of nearly 340 sq mi (882 sq km). As of the last survey in 2008, there were 31 to 46 wolves within 7 to 9 packs that exclusively or partially reside within the park, and at least 5 packs are located wholly inside the Park boundaries (Ethier *et al.* 2008, p. 5). The 2008 estimates fall within the range of wolf estimates for the Park from the 1990s (Gogan *et al.* 2004) and early 2000s (Fox *et al.* 2001, pp. 6–7).

Within the boundaries of the WGL DPS, we currently manage seven units within the National Wildlife Refuge System with significant wolf activity. Primary among these are Agassiz National Wildlife Refuge (NWR), Tamarac NWR, and Rice Lake NWR in Minnesota; Seney NWR in the UP of Michigan; and Necedah NWR in central Wisconsin. Agassiz NWR has had as many as 20 wolves in 2 to 3 packs in recent years. Although in 1999 mange and illegal shootings reduced them to a single pack of 5 wolves and a separate lone wolf, since 2001, two packs with a total of 10 to 12 wolves have been using the Refuge. About 60 percent of the packs' territories are located on the Refuge or on an adjacent State-owned wildlife management area (Huschle in litt. 2005).

Data collected by Agassiz NWR staff during winter wolf sign surveys conducted in cooperation with the MN DNR during both the winters of 2007–08 and 2008–09 support the above wolf totals. Winter track data from 2007–08 suggest that one pack on Agassiz had a minimum size of five and one had a minimum size of six. The following winter's survey information suggested a minimum pack size of five for both packs (Knutson 2009, pers. comm.). Two packs of wolves that currently include about eight and five members, respectively, use Tamarac NWR and the

territory of a third occurs partly on the Refuge (Brininger 2009, pers. comm.). The size of the one pack using Rice Lake NWR, in Minnesota, has been reported at six to nine in previous years; in 2009 a maximum of three wolves was confirmed on the Refuge (McDowell 2009, pers. comm.), although total pack size may be greater.

Other single or paired wolves pass through the Refuge frequently (Stefanski 2004, pers. comm.; McDowell in litt. 2005). Seney NWR has 3 packs, representing 8–10 wolves, which partially reside on the Refuge (Roell 2010, pers. comm.). In 2010, two packs of six wolves each and at least one loner were detected on Necedah NWR (Wydeven *et al.* 2010, p. 41). Over the past 10 years, Sherburne and Crane Meadows NWR Complex in central Minnesota have had intermittent, but reliable, observations and signs of individual wolves each year. To date, no established packs have been documented on either of those Refuges. The closest established packs are within 15 mi (24 km) of Crane Meadows NWR at Camp Ripley Military Installation and 30 mi (48 km) north of Sherburne NWR at Mille Lacs State Wildlife Management Area (Berkley 2009, pers. comm.).

#### *Suitable Habitat Ownership and Protection*

In Minnesota, public lands, including national forests, a national park, national wildlife refuges, tax-forfeit lands (managed mostly by counties), State forests, State wildlife management areas, and State parks, encompass approximately 42 percent of current wolf range. American Indians and Tribes own 3 percent, an additional 1,535 sq mi (2,470 sq km), in Minnesota's wolf range (see Erb and Benson 2004, Table 1). In its 2001 Minnesota Wolf Management Plan, MN DNR states that it "will continue to identify and manage currently occupied and potential wolf habitat areas to benefit wolves and their prey on public and private land, in cooperation with landowners and other management agencies" (MN DNR 2001, p. 25). MN DNR will monitor deer and moose habitat and, when necessary and appropriate, improve habitat for these species. MN DNR maintains that several large public land units of State parks and State forests along the Wisconsin border will likely ensure that the connection between the two States' wolf populations will remain open to wolf movements. Nevertheless, MN DNR stated that it would cooperate with Wisconsin DNR to incorporate the effects of future development "into long-term viability analyses of wolf

populations and dispersal in the interstate area" (MN DNR 2001, p. 27).

The MN DNR Divisions of Forestry and Wildlife directly administer approximately 5,330 sq mi (13,805 sq km) of land in Minnesota's wolf range. The DNR has set goals of enlarging and protecting its forested land base by, in part, "minimizing the loss and fragmentation of private forest lands" (MN DNR 2000, p. 20) and by connecting forest habitats with natural corridors (MN DNR 2000, p. 21). It plans to achieve these goals and objectives via several strategies, including the development of (Ecological) Subsection Forest Resource Management Plans (SFRMP) and to expand its focus on corridor management and planning.

In 2005, the Forest Stewardship Council (FSC) certified that 4.84 million acres (1.96 million hectares) of State-administered forest land are "well managed" (FSC 2005); the Sustainable Forestry Initiative (SFI) also certified that MN DNR was managing these lands to meet its standards. For the FSC certification, independent certifiers assessed forest management against FSC's Lakes States Regional Standard, which includes a requirement to maximize habitat connectivity to the extent possible at the landscape level (FSC 2005, p. 22).

Efforts to maximize habitat connectivity in the range of wolves would complement measures the MN DNR described in its State wolf plan (MN DNR 2001, pp. 26–27). The Service will review certification evaluation reports issued by FSC to assess MN DNR's ongoing efforts in this area as part of its post-delisting monitoring.

Counties manage approximately 3,860 sq mi (9,997 sq km) of tax forfeit land in Minnesota's wolf range (MN DNR unpublished data). We are aware of no specific measures that any county in Minnesota takes to conserve wolves. If most of the tax-forfeit lands are maintained for use as timber lands or natural areas, however, and if regional prey levels are maintained, management specifically for wolves on these lands will not be necessary. MN DNR manages ungulate populations "on a regional basis to ensure sustainable harvests for hunters, sufficient numbers for aesthetic and nonconsumptive use, and to minimize damage to natural communities and conflicts with humans such as depredation of agricultural crops" (MN DNR 2001, p. 17). Moreover, although counties may sell tax-forfeit lands subject to Minnesota State law, they generally manage these lands to ensure that they will retain their productivity as forests into the future. For example, Crow Wing

County's mission for its forest lands includes the commitment to "sustain a healthy, diverse, and productive forest for future generations to come." In addition, at least four counties in Minnesota's wolf range—Beltrami, Carlton, Koochiching, and St. Louis—are certified by SFI, and four others (Aitkin, Cass, Itasca, and Lake) have been certified by FSC. About ten private companies with industrial forest lands in Minnesota's wolf range have also been certified by FSC.

There are no legal or regulatory requirements for the protection of wolf habitat, per se, on private lands in Minnesota. Land management activities such as timber harvest and prescribed burning carried out by public agencies and by private land owners in Minnesota's wolf range incidentally and significantly improves habitat for deer, the primary prey for wolves in the State. The impact of these measures is apparent from the continuing high deer densities in Minnesota's wolf range. The State's second largest deer harvest occurred in 2006, and approximately one-half of the Minnesota deer harvest is in the Forest Zone, which encompasses most of the occupied wolf range in the State (MN DNR 2009, Table 1).

Given the extensive public ownership and management of land within Minnesota's wolf range, as well as the beneficial habitat management expected from tribal lands, we believe suitable habitat, and especially an adequate wild prey base, will remain available to the State's wolf population for the foreseeable future. Management of private lands for timber production will provide additional habitat suitable for wolves and white-tailed deer.

Similarly, current lands in northern and central Wisconsin that are judged to be primary and secondary wolf habitat are well protected from significant adverse development and habitat degradation due to public ownership or protective management that preserves the habitat and wolf prey base. Primary habitat (that is, areas with greater than 50 percent probability of wolf pack occupancy; Wydeven *et al.* 1999, pp. 47–48) totals 5,812 sq mi (15,053 sq km). The 1999 Wisconsin wolf plan listed land ownership of primary and secondary wolf habitat (Wydeven *et al.* 1999, p. 48). In 2006, Sickley (2006, pers. comm.) provided an update of the data with more accurate land ownership data. That data show that about 55 percent of primary habitat was in public land including, Federal, State, or county ownership, and 7 percent was on tribal land. County lands, mostly county forests, comprised 29 percent of the

primary habitat, and Federal lands, mostly the Chequamegon–Nicolet National Forest, included another 17 percent.

Most tribal land (7 percent of primary habitat), while not public land, will likely remain as suitable deer and wolf habitat for the foreseeable future. State forest ownership protects 10 percent. Private industrial forest lands comprised another 10 percent of the primary habitat, although some of these lands have been subdivided for second or vacation home sites, reducing this acreage in recent years. The remaining 29 percent is in other forms of private ownership and is vulnerable to loss from the primary habitat category to an unknown extent (Sickley *in litt.* 2006, unpublished data updating Table C2 of WI DNR 1999, p. 48).

Areas judged to be secondary wolf habitat by WI DNR (10 to 50 percent probability of occupancy by wolf packs; Wydeven *et al.* 1999, pp. 47–48) were somewhat more developed or fragmented habitats and were less well protected overall, because only 43 percent were in public ownership and 5 percent were in Native American reservations. Public land that maintained secure habitat included county (17 percent) and national (18 percent) forests ownership protecting the largest segments, and State land protected 7 percent. Private industrial forest ownership provided protection to 5 percent, and the remaining 47 percent was in other forms of private ownership (Sickley *in litt.* 2006).

County forest lands represent the single largest category of primary wolf habitat in Wisconsin. Wisconsin Statute 28.11 guides the administration of county forests, and directs management for production of forest products together with recreational opportunities, wildlife, watershed protection, and stabilization of stream flow. This Statute also provides a significant disincentive to conversion for other uses. Any proposed withdrawal of county forest lands for other uses must meet a standard of a higher and better use for the citizens of Wisconsin, and be approved by two-thirds of the County Board. As a result of this requirement, withdrawals are infrequent, and the county forest land base is actually increasing.

This analysis shows that nearly three-quarters of the primary habitat in Wisconsin receives substantial protection due to ownership or management for sustainable timber production. Over half of the secondary habitat is similarly protected. Portions of the primary habitat in northeastern Wisconsin remained sparsely populated

with wolf packs until recently, but are filling in lately (Wydeven *et al.* 2010, Fig. 2, p. 66), although still allowing for some continuing wolf population expansion. In general, we believe this degree of habitat protection is more than adequate to support a viable wolf population in Wisconsin for the foreseeable future.

In the UP of Michigan, State and Federal ownership comprises 2.0 and 2.1 million acres respectively, representing 19.3 percent and 20.1 percent of the land surface of the UP. The Federal ownership is composed of 87 percent national forest, 8 percent national park, and 5 percent national wildlife refuge. The management of these three categories of Federal land is discussed elsewhere, but clearly will benefit wolves and their prey.

State lands on the UP are 94 percent State forest land, 6 percent State park, and less than 1 percent in fishing and boating access areas and State game areas. Part 525, Sustainable Forestry on State Forestlands, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, directs State forestland management in Michigan. It requires the MI DNR to manage the State forests in a manner consistent with sustainable forestry, to prepare and implement a management plan, and to seek and maintain a third party certification that the lands are managed in a sustainable fashion (MI DNR 2005c, p. 1).

Much of the private land on the UP is managed or protected in a manner that will maintain forest cover and provide suitable habitat for wolves and white-tailed deer. Nearly 1.9 million acres (0.8 million hectares) of large-tract industrial forest lands and another 1.9 million acres (0.8 million hectares) of smaller private forest land are enrolled in the Commercial Forest Act (CFA). These 3.7 million acres (1.5 million hectares) are managed for long-term sustainable timber production under forest management plans written by certified foresters; in return, the landowners benefit from a reduction in property taxes. In addition, nearly 37,000 acres on the UP are owned by The Nature Conservancy, and continue to be managed to restore and preserve native plant and animal communities. Therefore, these private land management practices currently are preserving an additional 36 percent of the UP as suitable habitat for wolves and their prey species.

In total, 39 percent of the UP is federally and State-owned land whose management will benefit wolf conservation for the foreseeable future, and another 36 percent is private forest

land that is being managed, largely under the incentives of the CFA, in a way that provides suitable habitat and prey for wolf populations. Therefore, a minimum of nearly three-quarters of the UP should continue to be suitable for wolf conservation, and we do not envision UP habitat loss or degradation as a problem for wolf population viability in the foreseeable future.

Hearne *et al.* (2003), determined that a viable wolf population (one having less than 10 percent chance of extinction over 100 years), should consist of at least 175 to 225 wolves (p. 170), and they modeled various likely scenarios of habitat conditions in the UP of Michigan and northern Wisconsin through the year 2020 to determine whether future conditions would support a wolf population of that size. Most scenarios of future habitat conditions resulted in viable wolf populations in each State through 2020. When the model analyzed the future conditions in the two States combined, all scenarios produced a viable wolf population through 2020. Their scenarios included increases in human population density, changes in land ownership that may result in decreased habitat suitability, and increased road density (pp. 101–151).

The large areas of unsuitable habitat in the eastern Dakotas; the northern portions of Iowa, Illinois, Indiana, and Ohio; and the southern areas of Minnesota, Wisconsin, and Michigan; as well as the relatively small areas of unoccupied potentially suitable habitat, will not contribute to the viability of wolves in the WGL DPS. Therefore, we have determined that the existing and likely future threats to wolves outside the currently occupied areas, and especially to wolves outside of Minnesota, Wisconsin, and the UP, do not rise to the level that they threaten the long-term viability of wolf populations in Minnesota, Wisconsin, and the UP of Michigan.

In summary, wolves currently occupy the vast majority of the suitable habitat in the WGL DPS, and that habitat is adequately protected for the foreseeable future. Unoccupied areas that have the characteristics of suitable habitat exist in small and fragmented parcels and are not likely to develop viable wolf populations. Threats to those habitat areas will not adversely impact the recovered wolf metapopulation in the DPS.

#### Prey

Wolf density is heavily dependent on prey availability (for example, expressed as ungulate biomass, Fuller *et al.* 2003, pp. 170–171), but prey availability is not

likely to threaten wolves in the WGL DPS. Conservation of primary wolf prey in the WGL DPS, white-tailed deer and moose, is clearly a high priority for State conservation agencies. As Minnesota DNR points out in its wolf management plan (MN DNR 2001, p. 25), it manages ungulates to ensure a harvestable surplus for hunters, nonconsumptive users, and to minimize conflicts with humans. To ensure a harvestable surplus for hunters, MN DNR must account for all sources of natural mortality, including loss to wolves, and adjust hunter harvest levels when necessary. For example, after severe winters in the 1990's, MN DNR modified hunter harvest levels to allow for the recovery of the local deer population (MN DNR 2001, p. 25). In addition to regulation of human harvest of deer and moose, MN DNR also plans to continue to monitor and improve habitat for these species.

Land management carried out by other public agencies and by private land owners in Minnesota's wolf range, including timber harvest and prescribed fire, incidentally and significantly improves habitat for deer, the primary prey for wolves in the State. The success of these measures is apparent from the continuing high deer densities in the Forest Zone of Minnesota, and the fact that the State's five largest deer harvests have occurred in the last 6 years, with a deer harvest averaging 241,000 deer over the last 5 years. Approximately one-half of the Minnesota deer harvest is in the Forest Zone, which encompasses most of the occupied wolf range in the State (Cornicelli 2008, pp. 208–209). There is no indication that harvest of deer and moose or management of their habitat will significantly depress abundance of these species in Minnesota's core wolf range. Therefore, lack of prey availability is not likely to pose a threat to wolves in the foreseeable future in the State.

The deer populations in Wisconsin and the UP of Michigan declined somewhat from historically high levels in recent years. Wisconsin's pre-season deer population has exceeded 1 million animals since 1984 (WI DNR undated a; Rolley 2007, p. 6; Rolley 2008, p. 6), and hunter harvest has exceeded 400,000 deer in 10 of the last 12 years (WI DNR 2010, p. 57). Across northern Wisconsin wolf range (Zone 1), winter deer density in northern deer management units averaged from 22–30 deer per sq mi (8.5–11.6 deer per sq km) between 2001–07, but declined to 17–18 deer per sq mi (6.6–6.9 deer per sq km) in 2009 and 2010. In Central Forest wolf range (Zone 2), winter deer density in deer management units averaged 29–50 deer

per sq mi (11.2–19.3 deer per sq km) from 2001 to 2007, and was 35 deer per sq mi (13.5 deer per sq km) in 2009, and 26 deer per sq mi (10.0 deer per sq km) in 2010 (WI DNR data).

Michigan's 2009 October forecast for the deer population was approximately 1.8 million deer, with about 312,800 residing in the UP; the 2010 estimates projected a slightly higher UP deer population (Doepker 2010, pers. comm.; Rudolph 2010, pers. comm.). Because of severe winter conditions (persistent, deep snow) in the UP, deer populations can change dramatically from year to year. Recently (2010) the MI DNR finalized a new deer management plan, to address ecological, social, and regulatory shifts. An objective of this plan is to manage deer at the appropriate scale, considering impacts of deer on the landscape and on other species, in addition to population size (MI DNR 2010, p. 20). Additionally, the Michigan wolf management plan addresses maintaining a sustainable population of wolf prey (MI DNR 2008, p. 36). Short of a major, and unlikely, shift in deer management and harvest strategies, there will be no shortage of prey for Wisconsin and Michigan wolves for the foreseeable future.

#### *Summary of Factor A*

The wolf population in the WGL DPS currently occupies all the suitable habitat area identified for recovery in the Midwest in the 1978 Recovery Plan and 1992 Revised Recovery Plan and most of the potentially suitable habitat in the WGL DPS. As discussed above under Suitable Habitat Ownership and Protection, much of the important wolf habitat in the DPS is in public ownership, and the suitable habitat in the DPS is adequately protected for the foreseeable future. We therefore conclude that destruction, modification, or curtailment of the species' habitat or range does not pose a significant threat to wolves within this DPS.

#### **B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes**

Threats to wolves resulting from uses for scientific or educational purposes are not likely to increase substantially following delisting of the WGL DPS, and any increased use for these purposes will be regulated and monitored by the States and Tribes in the core recovery areas. Since their listing under the Act, no wolves have been legally killed or removed from the wild in any of the nine States included in the WGL DPS for either commercial or recreational purposes. Some wolves may have been illegally killed for commercial use of the

pelts and other parts, but illegal commercial trafficking in wolf pelts or parts and illegal capture of wolves for commercial breeding purposes happens rarely. State wolf management plans for Minnesota, Wisconsin, and Michigan help ensure that wolves will not be killed for commercial or recreational purposes for many years following Federal delisting, so these forms of mortality will not likely emerge as new threats upon delisting. See Factor D for a detailed discussion of State wolf management plans, and for applicable regulations in States without wolf management plans.

We do not expect the use of wolves for scientific purposes to increase in proportion to total wolf numbers in the WGL DPS after delisting. While listed, the intentional or incidental killing, or capture and permanent confinement, of endangered or threatened wolves for scientific purposes has only legally occurred under permits or subpermits issued by the Service (under section 10(a)(1)(A)) or by a State agency operating under a cooperative agreement with the Service pursuant to section 6 of the Act (50 CFR 17.21(c)(5) and 17.31(b)). Although exact figures are not available, throughout the conterminous 48 States, such permanent removals of wolves from the wild have been very limited and probably comprise an average of not more than two animals per year since the species was first listed as endangered. In the WGL DPS, these animals were either taken from the Minnesota wolf population during long-term research activities (about 15 wolves) or were accidental takings as a result of research activities in Wisconsin (5 to 6 mortalities and 1 long-term confinement) and in Michigan (4 mortalities) (Berg in litt. 1998; Mech in litt. 1998; Roell in litt. 2004; Roell in litt. 2005a; Roell 2011, pers. comm.; Wydeven 2009, pers. comm.).

The Minnesota DNR plans to encourage the study of wolves with radio-telemetry after delisting, with an emphasis on areas where they expect wolf-human conflicts and where wolves are expanding their range (MN DNR 2001, p. 19). Similarly, Wisconsin and Michigan DNRs plan to continue to trap wolves for radio-collaring, examination, and health monitoring for the foreseeable future (WI DNR 1999, pp. 19–21; MI DNR 2008a, pp. 31–32; WI DNR 2006a, p. 14). The continued handling of wild wolves for research, including the administration of drugs, may result in some accidental deaths of wolves. We believe that capture and radio-telemetry-related injuries or mortalities will not increase



significantly above the level observed to date in proportion to wolf abundance; adverse effects to wolves associated with such activities have been minimal and would not constitute a threat to wolves in the WGL DPS.

No wolves have been legally removed from the wild for educational purposes in recent years. Wolves that have been used for such purposes are the captive-reared offspring of wolves that were already in captivity for other reasons, and this is not likely to change as a result of Federal delisting. We do not expect taking for educational purposes to constitute any threat to Midwest wolf populations in the DPS for the foreseeable future.

See Factor E for a discussion of Taking of Wolves by Native Americans for Certain Purposes. See the Depredation Control sections under Factor D for discussion of other past, current, and potential future forms of intentional and accidental take by humans, including depredation control, public safety, and under public harvest. While public harvest may include recreational harvest, it is likely that public harvest will also serve as a management tool, so it is discussed in Factor D.

#### Summary of Factor B

Taking wolves for scientific or educational purposes in the other States in the WGL DPS may not be regulated or closely monitored in the future, but the threat to wolves in those States will not be significant to the long-term viability of the wolf population in the WGL DPS. The potential limited commercial and recreational harvest that may occur in the DPS will be regulated by State and/or Tribal conservation agencies and is discussed under Factor D. Therefore, we conclude that overutilization for commercial, recreational, scientific, or educational purposes will not pose a significant threat to wolves in the WGL DPS.

### C. Disease or Predation

#### Disease

Many diseases and parasites have been reported for the wolf, and several of them have had significant impacts during the recovery of the species in the 48 conterminous States (Brand *et al.* 1995, p. 419; WI DNR 1999, p. 61). If not monitored and controlled by States, these diseases and parasites, and perhaps others, may threaten wolf populations in the future. Thus, to avoid a future decline caused by diseases or parasites, States and their partners will have to diligently monitor the prevalence of these pathogens in order

to effectively respond to significant outbreaks.

Canine parvovirus (CPV) is a relatively new disease that infects wolves, domestic dogs, foxes, coyotes, skunks, and raccoons. Recognized in the United States in 1977 in domestic dogs, it appeared in Minnesota wolves (based upon retrospective serologic evidence) live-trapped as early as 1977 (Mech *et al.* 1986, p. 105). Minnesota wolves, however, may have been exposed to the virus as early as 1973 (Mech and Goyal 1995, p. 568). Serologic evidence of wolf exposure to CPV peaked at 95 percent for a group of Minnesota wolves live-trapped in 1989 (Mech and Goyal 1993, p. 331). In a captive colony of Minnesota wolves, pup and yearling mortality from CPV was 92 percent of the animals that showed indications of active CPV infections in 1983 (Mech and Fritts 1987, p. 6), demonstrating the substantial impacts this disease can have on young wolves. It is believed that the population impacts of CPV occur via diarrhea-induced dehydration leading to abnormally high pup mortality (WI DNR 1999, p. 61). CPV has been detected in nearly every wolf population in North America including Alaska (Bailey *et al.* 1995, p. 443), and exposure in wolves is now believed to be almost universal.

There is no evidence that CPV has caused a population decline or has had a significant impact on the recovery of the Minnesota wolf population. Mech and Goyal (1995, p. 566, Table 1, p. 568, Fig. 3), however, found that high CPV prevalence in the wolves of the Superior National Forest in Minnesota occurred during the same years in which wolf pup numbers were low. Because the wolf population did not decline during the study period, they concluded that CPV-caused pup mortality was compensatory, that is, it replaced deaths that would have occurred from other causes, especially starvation of pups. They theorized that CPV prevalence affects the amount of population increase and that a wolf population will decline when 76 percent of the adult wolves consistently test positive for CPV exposure. Their data indicate that CPV prevalence in adult wolves in their study area increased by an annual average of 4 percent during 1979–93 and was at least 80 percent during the last 5 years of their study (Mech and Goyal 1995, pp. 566, 568).

Additional data gathered since 1995 suggests that CPV reduced pup survival both in the Superior National Forest and statewide, between 1984 and 2004; however, statewide there is some evidence of a slight increase in pup survival since about 1995. These

conclusions are based on an inverse relationship between pup numbers in summer captures and seroprevalence of CPV antibodies in summer-captured adult wolves (Mech *et al.* 2008, pp. 827–830).

In a more recent study, Mech and Goyal (2011) looked more specifically at CPV influence on the Superior National Forest population by evaluating five 7-year periods to determine when CPV had its greatest effects. They found the strongest effect on wolf pup survival was from 1981 to 1993, and that after that time, little effect was seen despite the continued seroprevalence of CPV antibodies (Mech and Goyal 2011, pp. 28–29). They conclude that, after CPV became endemic in the population, the population developed immunity and was able to withstand severe effects from the disease (Mech and Goyal 2011, pp. 28–29). The observed population effects in the Superior National Forest population are consistent with results for studies in smaller, isolated populations in Wisconsin and on Isle Royale, Michigan (Wydeven *et al.* 1995; Peterson *et al.* 1998), but indicate that CPV also had only a temporary population effect in a larger population.

The WI DNR and the WI DNR Wildlife Health, in conjunction with the U.S. Geological Survey National Wildlife Health Center in Madison, Wisconsin, (formerly the National Wildlife Health Laboratory) have an extensive dataset on the incidence of wolf diseases, beginning in 1981. Canine parvovirus exposure was evident in 5 of 6 wolves tested in 1981, and probably stalled wolf population growth in Wisconsin during the early and mid-1980s when numbers there declined or were static; at that time 75 percent of the 32 wolves tested were positive for CPV. During the following years of population increase (1988–96), only 35 percent of the 63 wolves tested were positive for CPV (WI DNR 1999, p. 62). More recent exposure rates for CPV continue to be high in Wisconsin wolves, with annual rates ranging from 60 to 100 percent among wild wolves handled from 2001 through mid-2006. Part of the reason for high exposure percentages is likely an increased emphasis in sampling pups and Central Forest wolves starting in 2001, so comparisons of post- and pre-2001 data are of limited value.

CPV appears not to be a significant cause of mortality, as only a single wolf (male pup) is known to have died from CPV during this period (Wydeven and Wiedenhoft 2002, p. 8 Table 4; 2003a, pp. 11–12 Table 4; 2004a, pp. 11–12 Table 5; 2005, pp. 19–20 Table 4; 2006, pp. 23–25 Table 4; 2009, Table 2; Wydeven *et al.* 2007, pp. 12–14; 2008,

pp. 19–21). While the difficulty of discovering CPV-killed pups must be considered, and it is possible that CPV-caused pup mortality is being underestimated, the continuing increase of the Wisconsin wolf population indicates that CPV mortality is no longer impeding wolf population growth in the State. It may be that many Wisconsin wolves have developed some degree of resistance to CPV, and this disease is no longer a significant threat in the State.

Similar to Wisconsin wolves, serological testing of Michigan wolves captured from 1992 through 2001 (most recent available data) shows that the majority of UP wolves have been exposed to CPV. Fifty-six percent of 16 wolves captured from 1992 to 1999 and 83 percent of 23 wolves captured in 2001 showed antibody titers at levels established as indicative of previous CPV exposure that may provide protection from future infection from CPV (Beheler in litt. undated, in litt. 2004). There are no data showing any CPV-caused wolf mortality or population impacts to the wolf population on the UP, but few wolf pups are handled in the UP (Hammill in litt. 2002, Beyer in litt. 2006a), so low levels of CPV-caused pup mortality may go undetected there. Mortality data are primarily collected from collared wolves, which until 2004 received CPV inoculations. Therefore, mortality data for the UP should be interpreted cautiously.

Sarcoptic mange is caused by a mite (*Sarcoptes scabiei*) infection of the skin. The irritation caused by the feeding and burrowing mites results in scratching and then severe fur loss, which in turn can lead to mortality from exposure during severe winter weather. The mites are spread from wolf to wolf by direct body contact or by common use of “rubs” by infested and uninfested animals. Thus, mange is frequently passed from infested females to their young pups, and from older pack members to their pack mates. In a long-term Alberta, Canada, wolf study, higher wolf densities were correlated with increased incidence of mange, and pup survival decreased as the incidence of mange increased (Brand *et al.* 1995, p. 428).

From 1991 to 1996, 27 percent of live-trapped Wisconsin wolves exhibited symptoms of mange. During the winter of 1992–93, 58 percent showed symptoms, and a concurrent decline in the Wisconsin wolf population was attributed to mange-induced mortality (WI DNR 1999, p. 61). Seven Wisconsin wolves died from mange from 1993 through October 15, 1998, and severe fur loss affected five other wolves that

died from other causes. During that period, mange was the third largest cause of death in Wisconsin wolves, behind trauma (usually vehicle collisions) and shooting (Thomas in litt. 1998). Largely as a result of mange, pup survival was only 16 percent in 1993, compared to a normal 30 percent survival rate from birth to 1 year of age (WI DNR 1999, p. 61).

Mange continues to occur on wolves in Wisconsin. From 2003 through 2007, researchers reported that 25 percent of live-trapped wolves showed signs of mange, but that figure declined to 11 percent of wolves handled in 2009 and 2010. Mortality data from closely monitored radio-collared wolves provides a relatively unbiased estimate of mortality factors, especially those linked to disease or illegal actions, because nearly all carcasses are located within a few days of deaths. Diseased wolves suffering from hypothermia or nearing death generally crawl into dense cover and may go undiscovered if they are not radio-tracked (Wydeven *et al.* 2001b, p. 14). Data from those closely monitored radio-collared wolves show that mange mortality ranged from 22 percent of deaths in 2006 and 12 percent in 2007 to 21 percent of deaths in 2008 (Wydeven in litt. 2009), 15 percent in 2009 (Wydeven *et al.* 2010, p. 13), and 6 percent in 2010 (Wydeven *et al.* 2011, p. 2).

Mange mortality does appear to be stabilizing or perhaps declining in Wisconsin. Not all mangy wolves succumb; other observations showed that some mangy wolves are able to survive the winter (Wydeven *et al.* 2001b, p. 14). Mange has been detected in Wisconsin wolves every year since 1991 when only 45 to 52 wolves occurred in the State, and may have slowed the growth of the wolf population in the early 1990s (Wydeven *et al.* 2009c), but despite its constant presence as an occasional mortality factor, the wolf population grew to its present (2011) level of 782 or more wolves.

The survival of pups during their first winter is believed to be strongly affected by mange. The highest to date wolf mortality (30 percent of radio-collared wolves; Wydeven and Wiedenhoeft 2004a, p. 12) from mange in Wisconsin occurred in 2003 and may have had more severe effects on pup survival than in previous years. The prevalence of the disease may have contributed to the relatively small population increase in 2003 (2.4 percent in 2003 as compared to the average 18 percent to that point since 1985). However, mange has not caused a decline in the State’s wolf population, and even though the rate of

population increase has slowed in recent years, the wolf population continues to increase despite the continued prevalence of mange in Wisconsin wolves. Although mange mortality may not be the primary limiting factor for wolf population growth in the State, the impacts of mange in Wisconsin need to be closely monitored, as identified and addressed in the Wisconsin wolf management plan (WI DNR 1999, p. 21; 2006a, p. 14).

Disease monitoring in Wisconsin has identified a second form of mange in the wild wolf population—demodectic mange (Wydeven and Wiedenhoeft 2008, p. 8). Demodectic mange mites are relatively common in domestic dogs, where symptoms are often minor. The WI DNR is closely monitoring wolf pups and examining all dead wolves to determine if this becomes a significant new cause of wolf mortality.

Wisconsin wolves had been treated with Ivermectin and vaccinated for CPV and canine distemper virus (CDV) when captured, but the practice was stopped in 1995 to allow the wolf population to experience more natural biotic conditions. Since that time, Ivermectin has been administered only to captured wolves with severe cases of mange. In the future, Ivermectin and vaccines will be used sparingly on Wisconsin wolves, but will be used to counter significant disease outbreaks (Wydeven in litt. 1998).

Seven Michigan wolves died from mange during 1993–1997, making it responsible for 21 percent of all mortalities, and constituted all of the disease-caused deaths, during that period (MI DNR 1997, p. 39). During bioyears (mid-April to mid-April) 1999–2009, mange-induced hypothermia killed 18 radio-collared Michigan wolves, representing 15 percent of the total mortality during those years. From 2004 through 2010, researchers found that 11 radio-collared wolves died from mange in the State (Roell 2010, pers. comm.). Before 2004, MI DNR treated all captured wolves with Ivermectin if they showed signs of mange. In addition, MI DNR vaccinated all captured wolves against CPV and CDV. These inoculations were discontinued in 2004 to provide more natural biotic conditions and to provide biologists with an unbiased estimate of disease-caused mortality rates in the population (Roell in litt. 2005b).

Among Minnesota wolves, mange may always have been present at low levels and may currently infect less than 10 percent of the State’s wolves. Of the 407 wolves trapped by Wildlife Services during 2006–2008 in response to depredation complaints, 52 (13 percent)

exhibited signs of mange (Hart 2009, pers. comm.); the proportion of wolves with signs of mange decreased from 17 percent in 2006 to 10 percent in 2008. During the previous 3-year period (2003–2005), the proportion of trapped wolves with signs of mange was also about 13 percent, suggesting that mange has not increased in prevalence among wolves in Minnesota since 2003. The incidence of mange among wolves targeted by Wildlife Services is likely not representative of the prevalence of the disease in the statewide wolf population; wolves targeted for depredation control appear to be more likely to carry the disease (Hart 2009, pers. comm.).

In a separate study, mortality data from 12 years (1994–2005) of monitoring radio-collared wolves in 7 to 9 packs in north-central Minnesota show that 11 percent died from mange (DelGiudice in litt. 2005). However, the sample size (17 total mortalities, 2 from mange in 1998 and 2004) is far too small to deduce trends in mange mortality over time. Furthermore, these data are from mange mortalities, while the Wildlife Services' data are based on mange symptoms, not mortalities. Other data show that from 1998 to 2010 in the Superior National Forest, 7 of approximately 163 radio-collared wolves were known to have died of mange (Mech unpublished).

It is hypothesized that the current incidence of mange is more widespread than it would have otherwise been, because the WGL wolf range experienced a series of mild winters beginning with the winter of 1997–1998 (Van Deelen 2005, Fig. 2). Mange-induced mortality is chiefly a result of winter hypothermia, thus the less severe winters resulted in higher survival of mangy wolves, and increased spread of mange to additional wolves during the following spring and summer. The high wolf population, and especially higher wolf density on the landscape, may also be contributing to the increasing occurrence of mange in the WGL wolf population.

Lyme disease, caused by the spirochete *Borrelia burgdorferi*, is another relatively recently recognized disease, first documented in New England in 1975, although it may have occurred in Wisconsin as early as 1969. It is spread by ticks that pass the infection to their hosts when feeding. Host species include humans, horses, dogs, white-tailed deer, white-footed mice, eastern chipmunks, coyotes, and wolves. The prevalence of Lyme disease exposure in Wisconsin wolves averaged 70 percent of live-trapped animals in 1988–91, dropped to 37 percent during

1992–97 and was back up to 56 percent (32 of 57 tested) in 2002–04 (Wydeven and Wiedenhoeft 2004b, pp. 23–24 Table 7; 2005, pp. 23–24 Table 7). Clinical symptoms have not been reported in wolves, but infected dogs can experience debilitating conditions, and abortion and fetal mortality have been reported in infected humans and horses. It is possible that individual wolves may be debilitated by Lyme disease, perhaps contributing to their mortality; however, Lyme disease is not believed to be a significant factor affecting wolf populations (Kreeger 2003, p. 212).

The dog louse (*Trichodectes canis*) has been detected in wolves in Ontario, Saskatchewan, Alaska, Minnesota, and Wisconsin (Mech *et al.* 1985, pp. 404–405; Kreeger 2003, p. 208; Paul in litt. 2005). Dogs are probably the source of the initial infections, and subsequently wild canids transfer lice by direct contact with other wolves, particularly between females and pups. Severe infestations result in irritated and raw skin, substantial hair loss, particularly in the groin. However, in contrast to mange, lice infestations generally result in loss of guard hairs but not the insulating under fur, thus, hypothermia is less likely to occur and much less likely to be fatal (Brand *et al.* 1995, p. 426). Even though observed in nearly 4 percent in a sample of 391 Minnesota wolves in 2003–05 (Paul in litt. 2005), dog lice infestations have not been confirmed as a cause of wolf mortality, and are not expected to have a significant impact even at a local scale.

Canine distemper virus (CDV) is an acute disease of carnivores that has been known in Europe since the sixteenth century and is now infecting dogs worldwide (Kreeger 2003, p. 209). CDV generally infects dog pups when they are only a few months old, so mortality in wild wolf populations might be difficult to detect (Brand *et al.* 1995, pp. 420–421). CDV mortality among wild wolves has been documented in two littermate pups and an adult male in Manitoba (Carbyn 1982, pp. 111–112; Stronen *et al.* 2011, p. 224), in two Alaskan yearling wolves (Peterson *et al.* 1984, p. 31), and in two Wisconsin wolves (an adult in 1985 and a pup in 2002) (Thomas in litt. 2006; Wydeven and Wiedenhoeft 2003b, p. 20). Carbyn (1982, pp. 113–116) concluded that CDV was a contributor to a 50 percent decline of the wolf population in Riding Mountain National Park (Manitoba, Canada) in the mid-1970s; current prevalence of CDV in that population is similar to that reported in the past (Stronen *et al.* 2011, pp. 223–226). Almberg *et al.* (2009, pp. 8–9) correlate

high wolf pup mortality in Yellowstone National Park in 1999 and 2005 with serologic evidence of high CDV exposure in wolves as well as other canids. They detected CDV in three wolf carcasses in 2008, indicating that distemper deaths also may have occurred during that year. In this and a related paper (Almberg *et al.* 2010, p. 2072), the authors predict periodic short-term declines from CDV, but no long-term threat to the wolf population from maintenance of this virus among multiple hosts in the Yellowstone ecosystem.

Serological evidence indicates that exposure to CDV is high among some Midwest wolves—29 percent in northern Wisconsin wolves and 79 percent in central Wisconsin wolves in 2002–04 (Wydeven and Wiedenhoeft 2004b, pp. 23–24 Table 7; 2005, pp. 23–24 Table 7). However, the continued strong recruitment in Wisconsin and elsewhere in North American wolf populations indicates that distemper is not likely a significant cause of mortality (Brand *et al.* 1995, p. 421).

Other diseases and parasites, including rabies, canine heartworm, blastomycosis, bacterial myocarditis, granulomatous pneumonia, brucellosis, leptospirosis, bovine tuberculosis, hookworm, coccidiosis, and canine hepatitis have been documented in wild wolves, but their impacts on future wild wolf populations are not likely to be significant (Brand *et al.* 1995, pp. 419–429; Hassett in litt. 2003; Johnson 1995, pp. 431, 436–438; Mech and Kurtz 1999, pp. 305–306; Thomas in litt. 1998, Thomas in litt. 2006, WI DNR 1999, p. 61; Kreeger 2003, pp. 202–214). Continuing wolf range expansion, however, likely will provide new avenues for exposure to several of these diseases, especially canine heartworm, raccoon rabies, and bovine tuberculosis (Thomas in litt. 2000, in litt. 2006), further emphasizing the need for disease monitoring programs.

In addition, the possibility of new diseases developing and existing diseases, such as chronic wasting disease (CWD), West Nile Virus (WNV) and canine influenza (Crawford *et al.* 2005, 482–485), moving across species barriers or spreading from domestic dogs to wolves must all be taken into account, and monitoring programs will need to address such threats. Currently there is no evidence that CWD can directly affect canids (Thomas in litt. 2006; Wild *et al.* 2010, p. 87). Wisconsin wolves have been tested for WNV at necropsy since the first spread of the virus across the State: To date, all results have been negative. Although experimental infection of dogs produced

no ill effects, WNV is reported to have killed two captive wolf pups, so young wolves may be at some risk (Thomas in litt. 2006).

In aggregate, diseases and parasites were the cause of 21 percent of the diagnosed mortalities of radio-collared wolves in Michigan from 1999 through 2004 (Beyer 2005, unpublished data) and 27 percent of the diagnosed mortalities of radio-collared wolves in Wisconsin from October 1979 through December 2009 (Wydeven *et al.* 2010, p. 45). In recent years (2006–10), disease has been the cause of death for 14 percent (10 of 70 dead wolves) of the diagnosed mortalities of radio-collared wolves in Wisconsin and 3 to 7 percent of all wolves (radio-collared and not collared) found dead in the State (72 to 94 wolves). During that time period, disease was the cause of death of 12 percent (5 of 43) of the diagnosed mortalities of radio-collared wolves in Michigan, and of 3 percent (6 of 199) of the total known wolf mortalities in Minnesota.

Many of the diseases and parasites are known to be spread by wolf-to-wolf contact. Therefore, the incidence of mange, CPV, CDV, and canine heartworm may increase as wolf densities increase in the more recently colonized areas (Thomas in litt. 2006). Because wolf densities generally are relatively stable following the first few years of colonization, wolf-to-wolf contacts will not likely lead to a continuing increase in disease prevalence in areas that have been occupied for several years or more and are largely saturated with wolf packs (Mech in litt. 1998).

Disease and parasite impacts may increase because several wolf diseases and parasites are carried and spread by domestic dogs. This transfer of pathogens from domestic dogs to wild wolves may increase as wolves continue to colonize non-wilderness areas (Mech in litt. 1998). Heartworm, CPV, and rabies are the main concerns (Thomas in litt. 1998), but dogs may become significant vectors for other diseases with potentially serious impacts on wolves in the future (Crawford *et al.* 2005, pp. 482–485). However, to date wolf populations in Wisconsin and Michigan have continued their expansion into areas with increased contacts with dogs and have shown no adverse pathogen impacts since the mid-1980s impacts from CPV.

Disease and parasite impacts are a recognized concern of the Minnesota, Michigan, and Wisconsin DNRs. The Michigan Gray Wolf Recovery and Management Plan states that necropsies will be conducted on all dead wolves,

and that all live wolves that are handled will be examined, with blood, skin, and fecal samples taken to provide disease information. The Michigan Plan states that the Michigan DNR will continue to monitor the prevalence and impact of disease on wolf health following Federal delisting (MI DNR 2008, pp. 32, 40–42).

Similarly, the Wisconsin Wolf Management Plan states that as long as the wolf is State-listed as a threatened or endangered species, the WI DNR will conduct necropsies of dead wolves and test a sample of live-captured wolves for diseases and parasites, with a goal of screening 10 percent of the State wolf population for diseases annually. However, the plan anticipates that following State delisting (which occurred on August 1, 2004), disease monitoring will be scaled back because the percentage of the wolf population that is live-trapped each year will decline. Disease monitoring of captured wolves currently is focusing on diseases known to be causing noteworthy mortality, such as mange, and other diseases for which data are judged to be sparse, such as Lyme disease and ehrlichiosis (Wydeven and Wiedenhoeft 2006, p. 8). The State will continue to test for disease and parasite loads through periodic necropsy and scat analyses. The 2006 update to the 1999 plan also recommends that all wolves live-trapped for other studies should have their health monitored and reported to the WI DNR wildlife health specialists (WI DNR 1999, p.21; 2006c, p. 14). Furthermore, the 2006 update identifies a need for “continued health monitoring to document significant disease events that may impact the wolf population and to identify new diseases in the population....” (WI DNR 2006a, p. 24).

The Minnesota Wolf Management Plan states that MN DNR “will collaborate with other investigators and continue monitoring disease incidence, where necessary, by examination of wolf carcasses obtained through depredation control programs, and also through blood or tissue physiology work conducted by the MN DNR and the U.S. Geological Survey. The DNR will also keep records of documented and suspected incidence of sarcoptic mange (MN DNR 2001, p. 32).” In addition, it will initiate “(R)egular collection of pertinent tissues of live captured or dead wolves” and periodically assess wolf health “when circumstances indicate that diseases or parasites may be adversely affecting portions of the wolf population (MN DNR 2001, p. 19).” Unlike Michigan and Wisconsin, Minnesota has not established minimum goals for the proportion of its

wolves that will be assessed for disease nor does it plan to treat any wolves, although it does not rule out these measures. Minnesota’s less intensive approach to disease monitoring and management seems warranted in light of its much greater abundance of wolves than in the other two States.

In areas within the WGL DPS, but outside Minnesota, Wisconsin, and Michigan, we lack data on the incidence of diseases or parasites in transient wolves. However, the boundary of the WGL DPS is laid out in a manner such that the vast majority of, and perhaps all, wolves that will occur in the DPS in the foreseeable future will have originated from the Minnesota–Wisconsin–Michigan wolf metapopulation. Therefore, they will be carrying the “normal” complement of Midwestern wolf parasites, diseases, and disease resistance with them. For this reason, any new pairs, packs, or populations that develop within the DPS are likely to experience the same low to moderate adverse impacts from pathogens that have been occurring in the core recovery areas.

The most likely exceptions to this generalization would arise from exposure to sources of novel diseases or more virulent forms that are being spread by other canid species that might be encountered by wolves dispersing into currently unoccupied areas of the DPS. To increase the likelihood of detecting such novel or more virulent diseases and thereby reduce the risk that they might pose to the core of the metapopulation after delisting, we will encourage these States and Tribes to provide wolf carcasses or suitable tissue, as appropriate, to the USGS National Wildlife Health Center or the Service’s National Wildlife Forensics Laboratory for necropsy. This practice should provide an early indication of new or increasing pathogen threats before they reach the core of the metapopulation or impact future transient wolves to those areas.

#### Disease Summary

We believe that several diseases have had noticeable impacts on wolf population growth in the Great Lakes region in the past. These impacts have been both direct, resulting in mortality of individual wolves, and indirect, by reducing longevity and fecundity of individuals or entire packs or populations. Canine parvovirus stalled wolf population growth in Wisconsin in the early and mid-1980s and has been implicated in the decline in the mid-1980s of the isolated Isle Royale wolf population in Michigan, and in attenuating wolf population growth in

Minnesota (Mech in litt. 2006). Sarcoptic mange has affected wolf recovery in Michigan's UP and in Wisconsin over the last 12 years, and it is recognized as a continuing issue.

Despite these and other diseases and parasites, the overall trend for wolf populations in the WGL DPS continues to be upward. Wolf management plans for Minnesota, Michigan, and Wisconsin include disease monitoring components that we expect will identify future disease and parasite problems in time to allow corrective action to avoid a significant decline in overall population viability. We conclude that diseases and parasites will not prevent continued population growth or the maintenance of viable wolf populations in the DPS. Delisting of wolves in the WGL DPS will not significantly change the incidence or impacts of disease and parasites on these wolves. Disease may eventually limit overall wolf carrying capacity and contribute to annual fluctuations in wolf abundance, but at current and foreseeable population levels, diseases are not likely to affect viability or place wolves at risk of again becoming endangered or threatened. Therefore, we conclude that diseases and parasites do not pose a significant threat to wolves in the WGL DPS.

#### Natural Predation

No wild animals habitually prey on wolves. Large prey such as deer, elk, or moose (Mech and Nelson 1989, pp. 207–208; Smith *et al.* 2001, p. 3), or other predators, such as mountain lions (*Puma concolor*), grizzly bears (*Ursus arctos horribilis*), or black bears (*Ursus americanus*) where they are extant (USFWS 2005, p. 3; Ballard *et al.* 2003, pp. 260–264), occasionally kill wolves, but such events have rarely been documented. Coyotes have also attempted to attack wolf pups (Ballard *et al.* 2003, p. 267), and along with bears and various medium-sized predators could pose a risk to wolf pups if adult wolves are not present. Predation and death by prey species are small components of wolf mortality and will not likely increase with delisting.

Wolves frequently are killed by other wolves, most commonly when packs encounter and attack a dispersing wolf as an intruder or when two packs encounter each other along a territorial boundary (Mech 1994, p. 201). This form of mortality is likely to increase as more of the available wolf habitat becomes saturated with wolf pack territories, as is the case in northeastern Minnesota, but such a trend is not yet evident from Wisconsin or Michigan data. From October 1979 through June 1998, researchers found that 7 (12

percent) of the mortalities of radio-collared Wisconsin wolves resulted from wolves killing wolves, and 8 of 73 (11 percent) mortalities were from this cause during 2000–05 (Wydeven 1998, p. 16 Table 4; Wydeven and Wiedenhoeft 2001, p. 8 Table 5; 2002, pp. 8–9 Table 4; 2003a, pp. 11–12 Table 4; 2004a, pp. 11–12 Table 5, 2005, p. 21 Table 5).

Among radio-collared wolves dying from known causes between October 1979 and December 2009, overall rate of intraspecific strife was 17 of 151 mortalities or 11 percent (Wydeven *et al.* 2010, p. 45). Gogan *et al.* (2004, p. 7) studied 31 radio-collared wolves in northern Minnesota from 1987 to 1991 and found that 4 (13 percent) were killed by other wolves, representing 29 percent of the total mortality of radio-collared wolves. Intra-specific strife caused 50 percent of mortality within Voyageurs National Park and 20 percent of the mortality of wolves adjacent to the Park (Gogan *et al.* 2004, p. 22). The DelGiudice data (in litt. 2005) show a 17 percent mortality rate from other wolves in another study area in north-central Minnesota from 1994 to 2005. This behavior is normal in healthy wolf populations and is an expected outcome of dispersal conflicts and territorial defense, as well as occasional intra-pack strife. This form of mortality is something with which the species has evolved, and it should not pose a threat to wolf populations in the WGL DPS once delisted.

#### Human-Caused Mortality

Because our concern about human-caused mortality is its overall effect on wolf mortality, the following discussion addresses the major human causes of wolf mortality, including illegal killing, depredation control, and vehicle collisions.

Humans have functioned as highly effective predators of the wolf in North America for several hundred years. European settlers in the Midwest attempted to eliminate the wolf entirely in earlier times, and the U.S. Congress passed a wolf bounty that covered the Northwest Territories in 1817. Bounties on wolves subsequently became the norm for States across the species' range. In Michigan, an 1838 wolf bounty became the ninth law passed by the First Michigan Legislature; this bounty remained in place until 1960. A Wisconsin bounty was instituted in 1865 and was repealed about the time wolves were extirpated from the State in 1957. Minnesota maintained a wolf bounty until 1965.

Subsequent to the gray wolf's listing as a federally endangered species, the

Act and State endangered species statutes prohibited the killing of wolves except under very limited circumstances, such as in defense of human life, for scientific or conservation purposes, or under special regulations intended to reduce wolf depredations of livestock or other domestic animals. The resultant reduction in human-caused wolf mortality is the main cause of the wolf's reestablishment in large parts of its historical range. It is clear, however, that illegal killing of wolves has continued in the form of intentional mortality and incidental deaths.

Illegal killing of wolves occurs for a number of reasons. Some of these killings are accidental (for example, wolves are hit by vehicles, mistaken for coyotes and shot, or caught in traps set for other animals); some of these accidental killings are reported to State, Tribal, and Federal authorities. It is likely that most illegal killings, however, are intentional and are never reported to government authorities. Because they generally occur in remote locations and the evidence is easily concealed, we lack reliable estimates of annual rates of intentional illegal killings.

In Wisconsin, all forms of human-caused mortality accounted for 56 percent of the diagnosed deaths of radio-collared wolves from October 1979 through December 2009 (Wydeven *et al.* 2010, p. 45). Thirty-four percent of the diagnosed mortalities, and 62 percent of the human-caused mortalities, were from illegal killing (mainly shootings). Another 9 percent of all the diagnosed mortalities (15 percent of the human-caused mortalities) resulted from vehicle collisions. (These percentages and those in the following paragraphs exclude seven radio-collared Wisconsin wolves that were killed in depredation control actions by USDA—APHIS—Wildlife Services. The wolf depredation control programs in the Midwest are discussed separately under Depredation Control, below.) Data from 2006 through 2010 (68 diagnosed mortalities of radio-collared wolves) show the mortality percentages for illegal kills to be similar, with 35 percent of the diagnosed mortalities being illegally killed. The mortality percentage for vehicle collisions during this time period remained constant (13 percent) (Wydeven *et al.* 2007, p. 10; and Wydeven and Wiedenhoeft 2008, Summary). In 2010, mortality data from actively monitored wolves show that, of wolves that died, 38 percent were killed illegally (all shootings); 12 percent were euthanized for human safety concerns; 6 percent of the deaths were disease

related; 6 percent died from apparent old age, 6 percent, from intraspecific strife, and 12 percent, from vehicle collisions; and the causes for 19 percent of the deaths were unknown (Wydeven *et al.* 2011, p. 2).

During the periods that wolves were federally delisted (from March 2007 through September 2008 and from April through early July 2009), 92 wolves were killed for depredation control, including 8 legally shot by private landowners (Wydeven and Wiedenhoef 2008, p. 8; Wydeven *et al.* 2009b, p. 6; Wydeven *et al.* 2010, p. 13).

As the Wisconsin population has increased in numbers and range, vehicle collisions have increased as a percentage of radio-collared wolf mortalities. During the October 1979 through June 1992 period, only 1 of 27 (4 percent) known mortalities was from that cause; but from July 1992 through June 1998, vehicle collisions caused 5 of the 26 (19 percent) known mortalities (Wydeven 1998, p. 6). From 2002 through 2004, of 45 known mortalities, 7 (16 percent) were from that cause (Wydeven and Wiedenhoef 2003a, pp. 11–12 Table 4; 2004a, pp. 11–12 Table 5; 2005, pp. 19–20 Table 4); and from 2005 through 2009, of 459 known mortalities, 126 (27 percent) were from that cause (Wydeven and Wiedenhoef 2005, p. 20; Wydeven and Wiedenhoef 2006, p. 20; Wydeven *et al.* 2007a, p. 7; Wydeven *et al.* 2007b, p. 10; Wydeven and Wiedenhoef 2008, p. 7; Wydeven *et al.* 2009a, pp. 19–21; Wydeven and Wiedenhoef 2009, Table 3; Wydeven *et al.* 2010, Table 7).

A comparison over time for diagnosed mortalities of radio-collared Wisconsin wolves shows that 18 of 57 (32 percent) were illegally killed from October 1979 through 1998, while 12 of 42 (29 percent) were illegally killed from 2002 through 2004, and 24 of 72 (33 percent) were illegally killed from 2005 to March 2007 (WI DNR 1999, p. 63; Wydeven and Wiedenhoef 2003a, pp. 11–12 Table 4; 2004a, pp. 11–12 Table 4; 2005, pp. 19–20 Table 4; Wydeven *et al.* 2006a, p. 6; 2006b, p. 8; 2007, pp. 6–7; 2008a, p. 10). In 2006, prior to the Federal delisting the following year, 17 of 72 wolves found dead in the State were killed illegally. Among nine radio-collared wolves that had died in 2006, six (67 percent) were illegally killed. In 2007, after Federal delisting, 10 of 90 dead wolves found in the State were illegally killed, and 3 (19 percent) of the radio-collared wolves found dead were illegally killed. In 2008, 14 of 94 dead wolves found in Wisconsin were illegally killed, and 4 (28 percent) of 14 radio-collared wolves found dead were illegal kills. In 2009, when wolves were

again federally listed for most of the year, 20 of the 72 dead wolves found in Wisconsin were illegally killed, and 8 (62 percent) of 13 radio-collared wolves found dead were illegal kills. In 2010, when wolves continued to be federally listed, 15 of 72 dead wolves were illegally killed, and 7 (44 percent) of 16 radio-collared wolves were illegally killed.

Thus the number of known illegally killed wolves declined slightly from 17 in 2006, to 10 in 2007 and 14 in 2008, increased to 20 in 2009, and declined to 15 in 2010. Among radio-collared wolves found dead, illegal killing represented 67 percent of all mortality in 2006, 19 percent in 2007, 23 percent in 2008, 62 percent in 2009, and 44 percent in 2010 (Wydeven *et al.* 2010, p. 13; Wydeven *et al.* 2011, p. 2).

In the UP of Michigan, human-caused mortalities accounted for 75 percent of the diagnosed mortalities, based upon 34 wolves recovered from 1960 to 1997, including mostly non-radio-collared wolves. Twenty-eight percent of all the diagnosed mortalities and 38 percent of the human-caused mortalities were from shooting. In the UP during that period, about one-third of all the known mortalities were from vehicle collisions (MI DNR 1997, pp. 5–6). During the 1998 Michigan deer hunting season, three radio-collared wolves were shot and killed, resulting in one arrest and conviction (Hammill in litt. 1999, Michigan DNR 1999). During the subsequent 3 years, eight additional wolves were killed in Michigan by gunshot, and the cut-off radio-collar from a ninth animal was located, but the animal was never found. These incidents resulted in six guilty pleas, with three cases remaining open to date.

Data collected from radio-collared wolves from the 1999 to 2009 bioyears (mid-April to mid-April) show that human-caused mortalities still account for the majority of the wolf mortalities (66 percent) in Michigan. Deaths from vehicular collisions were about 18 percent of total mortality (27 percent of the human-caused mortality) and showed no trend over this 11-year period. Deaths from illegal killing constituted 39 percent of all mortalities (60 percent of the human-caused mortality) over the period. From 1999 through 2001, illegal killings were 31 percent of the mortalities, but this increased to 42 percent during the 2002 through 2004 bioyears and to 40 percent during bioyears 2005 through 2010 (Roell 2010, pers. comm.).

Most Michigan residents place a high priority on wolf management actions that address public concerns for human safety (Beyer *et al.* 2006). Quick and

professional responses to wolf conflicts have been important for wolf recovery (Ruid *et al.* 2009, p. 280). In most cases, people can take simple, sensible measures to avoid those situations and protect themselves against harm. Other cases may warrant higher levels of concern and professional assistance. Michigan DNR solved most wolf-human conflicts using nonlethal methods (Roell 2010, pers. comm.). However, in a few incidents lethal control was warranted and carried out under Federal regulations (50 CFR 17.21, which allows the take of an endangered species when there is a “demonstrable but nonimmediate threat” to protect human safety, or to euthanize a sick or injured wolf, but only if it is not reasonably possible to translocate the animal alive), or while wolves were not federally protected (Roell 2010 *et al.*, p. 9). Since 2004 the Michigan DNR and USDA–Wildlife Services have killed 13 animals (12 involving human safety and 1 sick wolf) under the authority of this regulation (Roell 2010 *et al.*, p. 9). Two others were killed for human safety concerns while wolves were federally delisted (Roell 2010, pers. comm.).

North-central Minnesota data from 16 diagnosed mortalities of radio-collared wolves over a 12-year period (1994–2005) show that human-causes resulted in 69 percent of the diagnosed mortalities. This includes 1 wolf accidentally snared, 2 vehicle collisions, and 8 (50 percent of all diagnosed mortalities) that were shot (DelGiudice in litt. 2005). However, this data set of only 16 mortalities over 12 years is too small for reliable comparison to Wisconsin and Michigan data.

A smaller mortality dataset is available from a 1987–91 study of wolves in, and adjacent to, Minnesota’s Voyageurs National Park, along the Canadian border. Of 10 diagnosed mortalities, illegal killing outside the Park was responsible for a minimum of 60 percent of the deaths (Gogan *et al.* 2004, p. 22). Furthermore, in the Superior National Forest from 1998 to 2010, of approximately 163 radio-collared wolves, 6 were known to have been killed illegally by humans (Mech unpublished).

Two Minnesota studies provide some limited insight into the extent of human-caused wolf mortality before and after the species’ listing. On the basis of bounty data from a period that predated wolf protection under the Act by 20 years, Stenlund (1955, p. 33) found an annual human-caused mortality rate of 41 percent. Fuller (1989, pp. 23–24) provided 1980–86 data from a north-central Minnesota study area and found an annual human-caused mortality rate



of 29 percent, a figure that includes 2 percent mortality from legal depredation control actions. Drawing conclusions from comparisons of these two studies, however, is difficult due to the confounding effects of habitat quality, exposure to humans, prey density, differing time periods, and vast differences in study design. Although these figures provide support for the contention that human-caused mortality decreased after the wolf became protected under the Act, it is not possible at this time to determine if human-caused mortality (apart from mortalities from depredation control) has significantly changed over the nearly 35-year period that the gray wolf has been listed as threatened or endangered.

Wolves were largely eliminated from the Dakotas in the 1920s and 1930s and were rarely reported from the mid-1940s through the late 1970s. Ten wolves were killed in these two States from 1981 to 1992 (Licht and Fritts 1994, pp. 76–77). Seven more were killed in North Dakota since 1992, with four of these mortalities occurring in 2002 and 2003; in 2001, one wolf was killed in Harding County in extreme northwestern South Dakota. The number of reported sightings of wolves in North Dakota is increasing. From 1993 to 1998, six wolf depredation reports were investigated in North Dakota, and adequate signs were found to verify the presence of wolves in two of the cases. A den with pups was also documented in extreme north-central North Dakota near the Canadian border in 1994. From 1999 to 2003, residents of North Dakota reported 16 wolf sightings or depredation incidents to USDA–APHIS–Wildlife Services, and 9 of these incidents were verified. Additionally, one North Dakota wolf sighting was confirmed in early 2004, two wolf depredation incidents were verified north of Garrison in late 2005, and one wolf was found dead in Eddy County in 2009. USDA–APHIS–Wildlife Services also confirmed a wolf sighting along the Minnesota border near Gary, South Dakota, in 1996, and a trapper with the South Dakota Game, Fish, and Parks Department sighted a lone wolf in the western Black Hills in 2002.

Several other unconfirmed sightings have been reported from these States, including two reports in South Dakota in 2003. Wolves killed in North and South Dakota were most often shot by hunters after being mistaken for coyotes, or were killed by vehicles. The 2001 mortality in South Dakota and one of the 2003 mortalities in North Dakota were caused by M–44 devices that had been legally set in response to complaints about coyotes.

In and around the core recovery areas in the Midwest, a continuing increase in wolf mortalities from vehicle collisions, both in actual numbers and as a percent of total diagnosed mortalities, is expected as wolves continue their colonization of areas with more human developments and a denser network of roads and vehicle traffic. In addition, the growing wolf populations in Wisconsin and Michigan are producing greater numbers of dispersing individuals each year, and this also will contribute to increasing numbers of wolf–vehicle collisions. This increase in accidental deaths would be unaffected by a removal of wolves in the WGL DPS from the protections of the Act.

In those areas of the WGL DPS that are beyond the areas currently occupied by wolf packs in Minnesota, Wisconsin, and Michigan, we expect that human-caused wolf mortality in the form of vehicle collisions, shooting, and trapping have been removing all, or nearly all, the wolves that disperse into these areas. We expect this to continue after Federal delisting. Road densities are high in these areas, with numerous interstate highways and other freeways and high-speed thoroughfares that are extremely hazardous to wolves attempting to move across them. Shooting and trapping of wolves also is likely to continue as a threat to wolves in these areas for several reasons. Especially outside of Minnesota, Wisconsin, and Michigan, hunters will not expect to encounter wolves, and may easily mistake them for coyotes from a distance, resulting in unintentional shootings.

It is important to note that, despite the difficulty in measuring the extent of illegal killing of wolves, all sources of wolf mortality, including legal (for example, depredation control) and illegal human-caused mortality, have not been of sufficient magnitude to stop the continuing growth of the wolf population in Wisconsin and Michigan, nor to cause a wolf population decline in Minnesota. This indicates that total wolf mortality does not threaten the continued viability of the wolf population in these three States, or in the WGL DPS.

#### Human-caused Mortality Summary

The high reproductive potential of wolves allows wolf populations to withstand relatively high mortality rates, including human-caused mortality. The principle of compensatory mortality was previously believed to occur in wolf populations. This means that human-caused mortality is not simply added to “natural” mortality, but rather replaces

a portion of it. Thus, the addition of intentional killing of wolves to a wolf population was thought to reduce the mortality rates from other causes on the population (for example, Fuller *et al.* 2003). Creel and Rotella (2010) reexamined this concept with regards to wolves. They found that, contrary to the previously held belief, wolf population growth declined as human-caused mortality increased (Creel and Rotella 2010, p. 3). Their study concludes that wolves can be harvested within limits, but that human-caused mortality was strongly additive in total mortality (Creel and Rotella 2010, p. 6).

Minnesota, Wisconsin, and Michigan, however, have committed to continue to regulate human-caused mortality so that it does not reduce the WGL wolf population below recovery levels. The wolf populations in Minnesota, Wisconsin, and Michigan will stop growing when they have saturated the suitable habitat and are curtailed in less suitable areas by natural mortality (disease, starvation, and intraspecific aggression), depredation management, incidental mortality (for example, road kill), illegal killing, and other means. At that time, we should expect to see population declines in some years followed by short-term increases in other years, resulting from fluctuations in birth and mortality rates. Adequate wolf monitoring programs, as described in the Michigan, Wisconsin, and Minnesota wolf management plans, are likely to identify high mortality rates or low birth rates that warrant corrective action by the management agencies (see Regulatory Mechanisms in Minnesota, Wisconsin, and Michigan, below). The goals of all three State wolf management plans are to maintain wolf populations well above the numbers recommended in the Recovery Plan for the Eastern Timber Wolf to ensure long-term viable wolf populations. The State management plans recommend a minimum wolf population of 1,600 in Minnesota, 250 in Wisconsin (with a management goal of 350), and 200 in Michigan.

Despite human-caused mortalities of wolves in Minnesota, Wisconsin, and Michigan, these wolf populations have continued to increase in both numbers and range. As long as other mortality factors do not increase significantly and monitoring is adequate to document, and if necessary counteract (see Post-Delisting Monitoring, below), the effects of excessive human-caused mortality should that occur, the Minnesota-Wisconsin-Michigan wolf population will not decline to nonviable levels in the foreseeable future as a result of human-caused killing or other forms of

predation. Therefore, we conclude that predation, including all forms of human-caused mortality, does not pose a significant threat to wolves in the WGL DPS.

#### D. The Inadequacy of Existing Regulatory Mechanisms

The inadequacy of existing regulatory mechanisms is one of five factors that, under the Endangered Species Act (Act), may result in a determination as to whether a species should be listed or not. In analyzing whether the existing regulatory mechanisms are adequate, the Service reviews relevant Federal, State, and tribal laws, plans, regulations, memoranda of understanding, cooperative agreements and other such factors that influence conservation of the species in question, including analyzing the extent to which those mechanisms can be relied upon. Other examples include State governmental actions enforced under a State statute or constitution, or Federal action under statute.

Strongest weight is given to statutes and their implementing regulations, and management direction that stems from those laws and regulations. Some other agreements are more voluntary in nature; in those cases we analyze the specific facts to determine the extent to which it can be relied on in the future, including how it addresses threats to the species. We consider all pertinent information, including the efforts and conservation practices of State governments, whether or not these are enforceable by law. Regulatory mechanisms, if they exist, may preclude the need for listing if such mechanisms are judged to adequately address the threat to the species such that listing is not warranted. Conversely, threats on the landscape are exacerbated when not addressed by existing regulatory mechanisms, or when the existing mechanisms are not adequate (or not adequately implemented or enforced).

The following sections discuss the adequacy of regulatory mechanisms that would be implemented if the WGL DPS were delisted, that is, removed from the List of Endangered and Threatened Wildlife. For the reasons described in the following section, the Service has determined that regulatory mechanisms that will be in place following delisting will be adequate to ensure that this DPS of wolves remains robust.

#### *Regulatory Mechanisms in Minnesota, Wisconsin, and Michigan*

##### State Wolf Management Planning

During the 2000 legislative session, the Minnesota Legislature passed wolf management provisions addressing wolf protection, taking of wolves, and directing MN DNR to prepare a wolf management plan. The MN DNR revised a 1999 draft wolf management plan to reflect the legislative action of 2000, and completed the Minnesota Wolf Management Plan (MN Plan) in early 2001 (MN DNR 2001, pp. 8–9).

The Wisconsin Natural Resources Board (NRB) approved the Wisconsin Wolf Management Plan in October 1999 (WI Plan). In 2004 and 2005 the Wisconsin Wolf Science Advisory Committee and the Wisconsin Wolf Stakeholders group reviewed the 1999 Plan, and the Science Advisory Committee subsequently developed updates and recommended modifications to the 1999 Plan. The WI DNR presented the Plan updates and modifications to the Wisconsin NRB on June 28, 2006, and the NRB approved them at that time, with the understanding that some numbers would be updated and an additional reference document would be added (Holtz in litt. 2006). The updates were completed and received final NRB approval on November 28, 2006 (WI DNR 2006a, p. 1).

In late 1997, the Michigan Wolf Recovery and Management Plan (MI Plan) was completed and received the necessary State approvals. It primarily focused on wolf recovery, rather than long-term management of a large wolf population and the conflicts that result as a consequence of successful wolf restoration. In 2006 the MI DNR convened a Michigan Wolf Management Roundtable committee (Roundtable) to provide guiding principles to the DNR on changes and revisions to the 1997 Plan and to guide management of Michigan wolves and wolf-related issues following Federal delisting of the species. The MI DNR relied heavily on those guiding principles as it drafted a new wolf management plan. The Roundtable was composed of representatives from 20 Michigan stakeholder interests in wolf recovery and management, and its membership is roughly equal in numbers from the UP and the LP. During 2006, the Roundtable provided its “Recommended Guiding Principles for Wolf Management in Michigan” to the

DNR in November (Michigan Wolf Management Roundtable 2006, p. 2). Based on those Roundtable recommendations, a revised Michigan Wolf Management Plan was completed in July 2008 (MI DNR 2008a). The complete text of the Wisconsin, Michigan, and Minnesota wolf plans can be found on our Web site (see **FOR FURTHER INFORMATION CONTACT**).

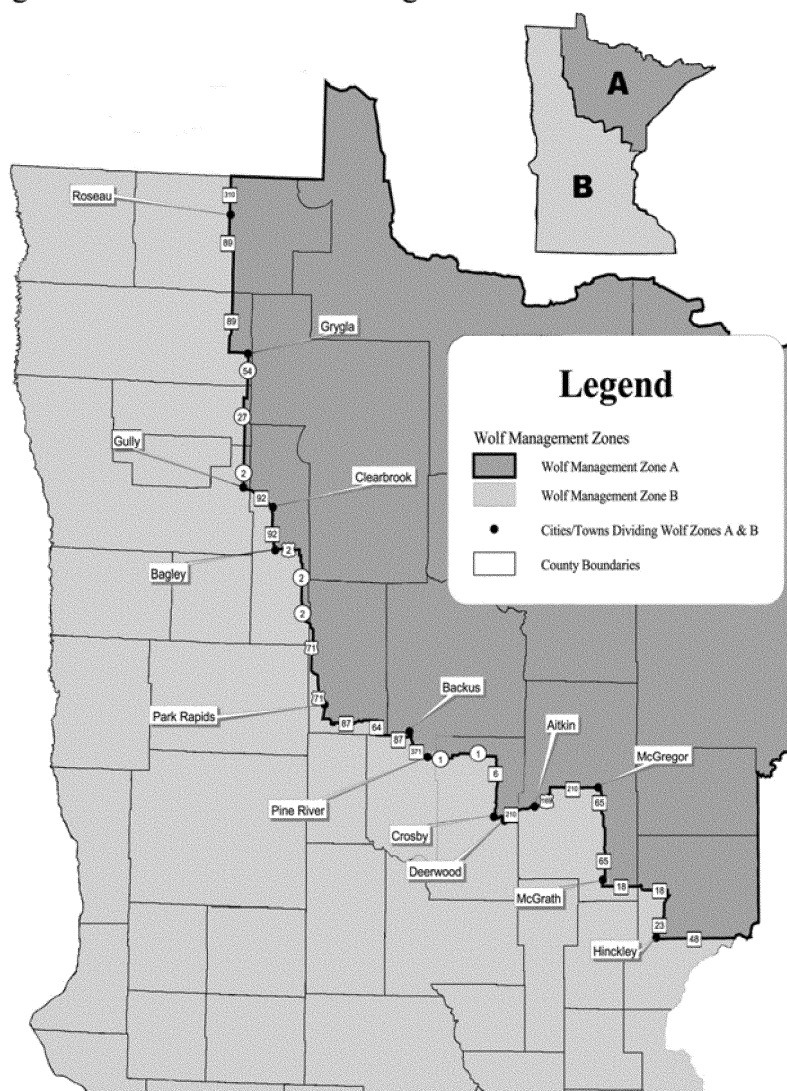
##### The Minnesota Wolf Management Plan

The Minnesota Plan is based, in part, on the recommendations of a State wolf management roundtable (MN DNR 2001, Appendix V) and on a State wolf management law enacted in 2000 (MN DNR 2001, Appendix I). This law and the Minnesota Game and Fish Laws constitute the basis of the State’s authority to manage wolves. The Plan’s stated goal is “to ensure the long-term survival of wolves in Minnesota while addressing wolf-human conflicts that inevitably result when wolves and people live in the same vicinity” (MN DNR 2001, p. 2). It establishes a minimum goal of 1,600 wolves in the State. Key components of the plan are population monitoring and management, management of wolf depredation of domestic animals, management of wolf prey, enforcement of laws regulating take of wolves, public education, and increased staffing to accomplish these actions. Following Federal delisting, Minnesota DNR’s management of wolves would differ from their current management while wolves were listed as threatened under the Act. Most of these differences deal with the control of wolves that attack or threaten domestic animals.

The Minnesota Plan divides the State into two wolf management zones—Zones A and B (see Figure 2 below). Zone A corresponds to Federal Wolf Management Zones 1 through 4 (approximately 30,000 sq mi (77,700 sq km) in northeastern Minnesota) in the Service’s Recovery Plan for the Eastern Timber Wolf, whereas Zone B constitutes Zone 5 in that recovery plan (MN DNR 2001, pp. 19–20 and Appendix III; USFWS 1992, p. 72). Within Zone A, wolves would receive strong protection by the State, unless they were involved in attacks on domestic animals. The rules governing the take of wolves to protect domestic animals in Zone B would be less protective than in Zone A (see Post-delisting Depredation Control in Minnesota below).

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Figure 2. Minnesota wolf management zones.



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The MN DNR plans to allow wolf numbers and distribution to naturally expand, with no maximum population goal, and if any winter population estimate is below 1,600 wolves, it would take actions to “assure recovery” to 1,600 wolves (MN DNR 2001 p. 19). The MN DNR plans to continue to monitor wolves in Minnesota to determine whether such intervention is necessary. The MN DNR plans to conduct another statewide population survey in the winter of 2012–13 and at subsequent 5-year intervals. In addition to these statewide population surveys, MN DNR annually reviews data on depredation incident frequency and locations provided by Wildlife Services and winter track survey indices (see Erb 2008) to help ascertain annual trends in

wolf population or range (MN DNR 2001, pp. 18–19). The agency is currently evaluating alternatives to its current methodology with the potential to improve the efficiency and accuracy of its statewide population estimates (Stark 2009a, pers. comm.).

Minnesota (MN DNR 2001, pp. 21–24, 27–28) plans to reduce or control illegal mortality of wolves through education, increased enforcement of the State’s wolf laws and regulations, discouraging new road access in some areas, and maintaining a depredation control program that includes compensation for livestock losses. The MN DNR plans to use a variety of methods to encourage and support education of the public about the effects of wolves on livestock, wild ungulate populations, and human activities and the history and ecology of

wolves in the State (MN DNR 2001, pp. 29–30). These are all measures that have been in effect for years in Minnesota, although increased enforcement of State laws against take of wolves would replace enforcement of the Act’s take prohibitions. Financial compensation for livestock losses has increased to the full market value of the animal, replacing previous caps of \$400 and \$750 per animal (MN DNR 2001, p. 24). We do not expect the State’s efforts to result in the reduction of illegal take of wolves from existing levels, but we believe these measures will be crucial in ensuring that illegal mortality does not significantly increase after Federal delisting.

The likelihood of illegal take increases in relation to road density and human population density, but

changing attitudes towards wolves may allow them to survive in areas where road and human densities were previously thought to be too high (Fuller *et al.* 2003, p. 181). The MN DNR does not plan to reduce current levels of road access, but would encourage managers of land areas large enough to sustain one or more wolf packs to “be cautious about adding new road access that could exceed a density of one mile of road per square mile of land, without considering the potential effect on wolves” (MN DNR 2001, pp. 27–28).

Under Minnesota law, the illegal killing of a wolf is a gross misdemeanor and is punishable by a maximum fine of \$3,000 and imprisonment for up to 1 year. The restitution value of an illegally killed wolf is \$2,000 (MN DNR 2001, p. 29). The MN DNR acknowledges that increased enforcement of the State’s wolf laws and regulations would be dependent on increases in staff and resources, additional cross-deputization of tribal law enforcement officers, and continued cooperation with Federal law enforcement officers. Minnesota DNR has designated three conservation officers who are stationed in the State’s wolf range as the lead officers for implementing the wolf management plan (MN DNR 2001, pp. 29, 32; Stark 2009a, pers. comm.).

Minnesota DNR will consider wolf population management measures, including public hunting and trapping seasons and other methods, in the future. In 2011, the State law was changed to allow the MN DNR to consider a public harvest season when wolves are federally delisted, rather than requiring that such consideration occur no sooner than 5 years after Federal delisting (Minnesota Statutes 97B.645 Subd. 9). With this change, the DNR is allowed to begin the process of determining whether Minnesotans want a wolf harvest season. After wolves are federally delisted, the MN DNR may prescribe open seasons and restrictions for taking gray wolves, but must seek authorization from the legislature and provide opportunity for public comment. The legislation does not change the way the DNR will determine if Minnesota should have a wolf harvest or how such a harvest would be implemented, it only allows them to begin the decision-making process earlier. The Minnesota management plan requires that population management measures be implemented in such a way to maintain a statewide late-winter wolf population of at least 1,600 animals (MN DNR 2001, pp. 19–20), well above the planning goal of 1,251 to 1,400 wolves for the State in the Revised Recovery Plan (USFWS

1992, p. 28), therefore, implementing such management measures under that requirement would ensure the wolf’s continued survival in Minnesota.

*Depredation Control in Minnesota*—Although federally protected as a threatened species in Minnesota (since their 1978 reclassification), wolves that have attacked domestic animals have been killed by designated government employees under the authority of a special regulation (50 CFR 17.40(d)) under section 4(d) of the Act. However, no control of depredating wolves was allowed in Federal Wolf Management Zone 1, comprising about 4,500 sq mi (7,200 sq km) in extreme northeastern Minnesota (USFWS 1992, p. 72). In Federal Wolf Management Zones 2 through 5, employees or agents of the Service (including USDA–APHIS–Wildlife Services) have taken wolves in response to depredations of domestic animals within one-half mile of the depredation site. Young-of-the-year captured on or before August 1 must be released. The regulations that allow for this take (50 CFR 17.40(d)(2)(i)(B)(4)) do not specify a maximum duration for depredation control, but Wildlife Services personnel have followed internal guidelines under which they trap for no more than 10–15 days, except at sites with repeated or chronic depredation, where they may trap for up to 30 days (Paul 2004, pers. comm.).

During the period 1980–2010, the Federal Minnesota wolf depredation control program euthanized from 20 (in 1982) to 216 (in 1997) wolves annually. Annual averages (and percentage of statewide population) were 30 (2.2 percent) wolves killed from 1980 to 1984; 49 (3.0 percent), from 1985 to 1989; 115 (6.0 percent), from 1990 to 1994; 152 (6.7 percent), from 1995 to 1999; and 128 wolves (4.2 percent), from 2000 to 2005. During 2006–2010 an average of 157 wolves were killed each year—approximately 5.4 percent of wolves in the State (Erb 2008; USDA–Wildlife Services 2010, p. 3). Since 1980, the lowest annual percentage of Minnesota wolves killed under this program was 1.5 percent in 1982; the highest percentage was 9.4 in 1997 (Paul 2004, pp. 2–7; 2006, p. 1). Following the return of wolves in Minnesota to the list of threatened species in 2009, 195 and 192 wolves were killed in 2009 and 2010, respectively, in response to depredation of domestic animals in Minnesota. This is the highest 2-year consecutive total since authorization to control depredating wolves was allowed by special regulation under section 4(d) of the Act while wolves were federally listed.

This level of wolf removal for depredation control has not interfered with wolf recovery in Minnesota, although it may have slowed the increase in wolf numbers in the State, especially since the late-1980s, and may be contributing to the possibly stabilized Minnesota wolf population suggested by the 2003–2004 and 2007–2008 estimates (see additional information in Minnesota Recovery). Minnesota wolf numbers grew at an average annual rate of nearly 4 percent between 1989 and 1998 while the depredation control program was taking its highest percentages of wolves (Paul 2004, pp. 2–7).

Under a Minnesota statute, the Minnesota Department of Agriculture (MDA) compensates livestock owners for full market value of livestock that wolves have killed or severely injured. An authorized investigator must confirm that wolves were responsible for the depredation. The Minnesota statute also requires MDA to periodically update its Best Management Practices (BMPs) to incorporate new practices that it finds would reduce wolf depredation (Minnesota Statutes 2010, Section 3.737, subdivision 5).

*Post-delisting Depredation Control in Minnesota*—When the WGL DPS is delisted, depredation control will be authorized under Minnesota State law and conducted in conformance with the Minnesota Wolf Management Plan (MN DNR 2001). The Minnesota Plan divides the State into Wolf Management Zones A and B. Zone A is composed of Federal Wolf Management Zones 1–4, covering 30,728 sq mi (79,586 sq km), approximately the northeastern third of the State. Zone B is identical to the current Federal Wolf Management Zone 5, and contains the 54,603 sq mi (141,422 sq km.) that make up the rest of the State (MN DNR 2001, pp. 19–20 and Appendix III; USFWS 1992, p. 72). The statewide survey conducted during the winter of 2003–04 estimated that there were approximately 2,570 wolves in Zone A and 450 in Zone B (Erb in litt. 2005). As discussed in *Recovery Criteria* above, the Federal planning goal is 1,251–1,400 wolves for Zones 1–4 and no wolves in Zone 5 (USFWS 1992, p. 28).

In Zone A wolf depredation control is limited to situations of (1) immediate threat and (2) following verified loss of domestic animals. In this zone, if the DNR verifies that a wolf destroyed any livestock, domestic animal, or pet, and if the owner requests wolf control be implemented, trained and certified predator controllers may take wolves (specific number to be determined on a

case-by-case basis) within a 1-mile radius of the depredation site (depredation control area) for up to 60 days. In contrast, in Zone B, predator controllers may take wolves (specific number to be determined on a case-by-case basis) for up to 214 days after MN DNR opens a depredation control area, depending on the time of year. Under State law, the DNR may open a control area in Zone B anytime within 5 years of a verified depredation loss upon request of the landowner, thereby providing more of a preventative approach than is allowed in Zone A, in order to head off repeat depredation incidents (MN DNR 2001, p. 22).

State law and the Minnesota Plan will also allow for private wolf depredation control throughout the State. Persons may shoot or destroy a wolf that poses “an immediate threat” to their livestock, guard animals, or domestic animals on lands that they own, lease, or occupy. Immediate threat is defined as “in the act of stalking, attacking, or killing.” This does not include trapping because traps cannot be placed in a manner such that they trap only wolves in the act of stalking, attacking, or killing. Owners of domestic pets may also kill wolves posing an immediate threat to pets under their supervision on lands that they do not own or lease, although such actions are subject to local ordinances, trespass law, and other applicable restrictions. The MN DNR will investigate any private taking of wolves in Zone A (MN DNR 2001, p. 23).

To protect their domestic animals in Zone B, individuals do not have to wait for an immediate threat or a depredation incident in order to take wolves. At any time in Zone B, persons who own, lease, or manage lands may shoot wolves on those lands to protect livestock, domestic animals, or pets. They may also employ a predator controller to trap a wolf on their land or within 1 mile of their land (with permission of the landowner) to protect their livestock, domestic animals, or pets (MN DNR 2001, p. 23–24).

The Minnesota Plan will also allow persons to harass wolves anywhere in the State within 500 yards of “people, buildings, dogs, livestock, or other domestic pets or animals.” Harassment may not include physical injury to a wolf.

Depredation control will be allowed throughout Zone A, which includes an area (Federal Wolf Management Zone 1) where such control has not been permitted under the Act’s protection. Depredation in Zone 1, however, has been limited to 2 to 4 reported incidents per year, mostly of wolves killing dogs, although Wildlife Services received one

livestock depredation complaint in Zone 1 in 2008 (Hart pers. comm. 2009), and some dog kills in this zone probably go unreported. In 2009, there was one probable and one verified depredation of a dog near Ely, Minnesota, and in 2010 Wildlife Services confirmed three dogs killed by wolves in Zone 1 (USDA–Wildlife Services 2009, p. 3; USDA–Wildlife Services 2010, p. 3). There are few livestock in Zone 1; therefore, the number of verified future depredation incidents in that Zone is expected to be low, resulting in a correspondingly low number of depredating wolves being killed there after delisting.

The final change in Zone A is the ability for owners or lessees to respond to situations of immediate threat by shooting wolves in the act of stalking, attacking, or killing livestock or other domestic animals. We believe this is not likely to result in the killing of many additional wolves, as opportunities to shoot wolves “in the act” will likely be few and difficult to successfully accomplish, a belief shared by the most experienced wolf depredation agent in the lower 48 States (Paul in litt. 2006, p. 5). It is also possible that illegal killing of wolves in Minnesota will decrease, because the expanded options for legal control of problem wolves may lead to an increase in public tolerance for wolves (Paul in litt. 2006, p. 5).

Within Zone B, State law and the Minnesota Plan provide broad authority to landowners and land managers to shoot wolves at any time to protect their livestock, pets, or other domestic animals on land owned, leased, or managed by the individual. Such takings can occur in the absence of wolf attacks on the domestic animals. Thus, the estimated 450 wolves in Zone B could be subject to substantial reduction in numbers, and at the extreme, wolves could be eliminated from Zone B. However, there is no way to reasonably evaluate in advance the extent to which residents of Zone B will use this new authority, nor how vulnerable Zone B wolves will be. While wolves were under State management in 2007–08, landowners in Zone B shot six wolves under this authority. One additional wolf was trapped and euthanized in Zone B by a State certified predator controller in 2009 (Stark 2009b, pers. comm.).

The limitation of this broad take authority to Zone B is fully consistent with the Recovery Plan for the Eastern Timber Wolf’s advice that wolves should be restored to the rest of Minnesota but not to Zone B (Federal Zone 5) because that area “is not suitable for wolves” (USFWS 1992, p. 20). The Recovery Plan for the Eastern

Timber Wolf envisioned that the Minnesota numerical planning goal would be achieved solely in Zone A (Federal Zones 1–4) (USFWS 1992, p. 28), and that has occurred. Wolves outside of Zone A are not necessary to the establishment and long-term viability of a self-sustaining wolf population in the State, and, therefore, there is no need to establish or maintain a wolf population in Zone B. Accordingly, there is no need to maintain significant protection for wolves in Zone B in order to maintain a Minnesota wolf population that continues to satisfy the Federal recovery criteria after Federal delisting.

This expansion of depredation control activities will not threaten the continued survival of wolves in the State or the long-term viability of the wolf population in Zone A, the large part of wolf range in Minnesota. Significant changes in wolf depredation control under State management will primarily be restricted to Zone B, which is outside of the area necessary for wolf recovery (USFWS 1992, pp. 20, 28). Furthermore, wolves may still persist in Zone B despite the likely increased take there. The Eastern Timber Wolf Recovery Team concluded that the changes in wolf management in the State’s Zone A would be “minor” and would not likely result in “significant change in overall wolf numbers in Zone A.” They found that, despite an expansion of the individual depredation control areas and an extension of the control period to 60 days, depredation control will remain “very localized” in Zone A. The requirement that such depredation control activities be conducted only in response to verified wolf depredation in Zone A played a key role in the team’s evaluation (Peterson in litt. 2001). While wolves were under State management in 2007 and 2008, the number of wolves killed for depredation control (133 wolves in 2007 and 143 wolves in 2008) remained consistent with those killed under the special regulation under section 4(d) of the Act while wolves were federally listed (105, in 2004; 134, in 2005; and 122, in 2006).

Minnesota will continue to monitor wolf populations throughout the State and will also monitor all depredation control activities in Zone A (MN DNR 2001, p. 18). These and other activities contained in their plan will be essential in meeting their population goal of a minimum statewide winter population of 1,600 wolves, well above the planning goal of 1,251 to 1,400 wolves that the Revised Recovery Plan identifies as sufficient to ensure the

wolf's continued survival in Minnesota (USFWS 1992, p. 28).

#### The Wisconsin Wolf Management Plan

Both the Wisconsin and Michigan Wolf Management Plans are designed to manage and ensure the existence of wolf populations in the States as if they are isolated populations and are not dependent upon immigration of wolves from an adjacent State or Canada, while still maintaining connections to those other populations. We support this approach and believe it provides strong assurances that the wolf in both States will remain a viable component of the WGL DPS for the foreseeable future.

The WI Plan allows for differing levels of protection and management within four separate management zones (see figure 3). The Northern Forest Zone (Zone 1) and the Central Forest Zone (Zone 2) now contain most of the State's wolf population, with approximately 6 percent of the Wisconsin wolves in Zones 3 and 4 (Wydeven and Wiedenhoef 2009, Table 1). Zones 1 and 2 contain all the larger unfragmented areas of suitable habitat (see Wolf Range Ownership and Protection, above), so most of the State's wolf packs will continue to inhabit those parts of Wisconsin for the foreseeable future. At the time the Wisconsin Wolf Management Plan was completed, it recommended immediate reclassification from State-endangered to State-threatened status, because Wisconsin's wolf population had already exceeded its reclassification criterion of 80 wolves for 3 years. That State reclassification occurred in 1999, after the population exceeded that level for 5 years.

The Wisconsin Plan further recommends that the State manage for a wolf population of 350 wolves outside of Native American reservations, and specifies that the species should be

delisted by the State once the population reaches 250 animals outside of reservations. The species was proposed for State delisting in late 2003, and the State delisting process was completed in 2004. Upon State delisting, the species was classified as a "protected nongame species," a designation that continues State prohibitions on sport hunting and trapping of the species (Wydeven and Jurewicz 2005, p. 1; WI DNR 2006b, p. 71). The Wisconsin Plan includes criteria that would trigger State relisting to threatened (a decline to fewer than 250 wolves for 3 years) or endangered status (a decline to fewer than 80 wolves for 1 year). The Wisconsin Plan will be reviewed annually by the Wisconsin Wolf Advisory Committee and will be reviewed by the public every 5 years. Recently the WI DNR began work on updating the State's wolf management plan, which may include increasing the State management goal (Wydeven and Wiedenhoef 2009, p. 3).

The WI Plan was updated during 2004–06 to reflect current wolf numbers, additional knowledge, and issues that have arisen since its 1999 completion. This update is in the form of text changes, revisions to two appendices, and the addition of a new appendix to the 1999 plan, rather than as a major revision to the plan. Several components of the plan that are key to our delisting evaluation are unchanged. The State wolf management goal of 350 animals and the boundaries of the four wolf management zones remain the same as in the 1999 Plan. The updated 2006 Plan continues access management on public lands and the protection of active den sites. Protection of pack rendezvous sites, however, is no longer considered to be needed in areas where wolves have become well established, due to the transient nature of these sites and the larger wolf population. The

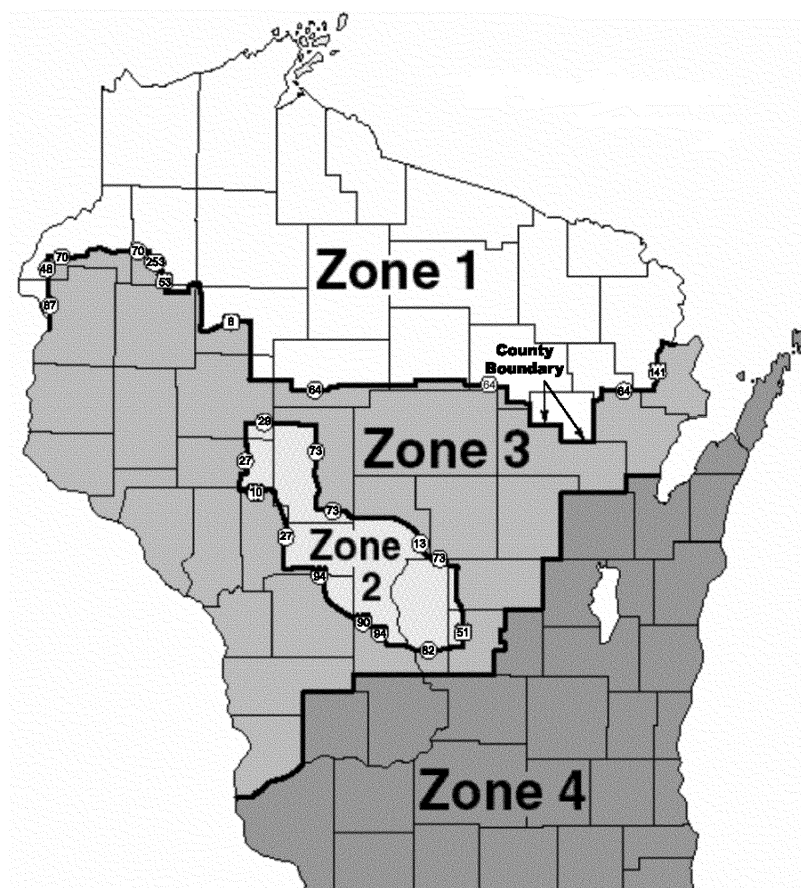
updated Plan states that rendezvous sites may need protection in areas where wolf colonization is still underway or where pup survival is extremely poor, such as in northeastern Wisconsin (WI DNR 2006a, p. 17). The guidelines for the wolf depredation control program did not undergo significant alteration during the update process. The only substantive change to depredation control practices is to expand the area of depredation control trapping in Zones 1 and 2 to 1 mi (1.6 km) outward from the depredation site, replacing the previous 0.5 mi (0.8 km) radius trapping zone (WI DNR 2006a, pp. 3–4).

An important component of the WI Plan is the annual monitoring of wolf populations by radio collars and winter track surveys in order to provide comparable annual data to assess population size and growth for at least 5 years after Federal delisting. This monitoring will include health monitoring of captured wolves and necropsies of dead wolves that are found. Wolf scat will be collected and analyzed to monitor for canine viruses and parasites. Health monitoring will be part of the capture protocol for all studies that involve the live capture of Wisconsin wolves (WI DNR 2006a, p. 14).

Cooperative habitat management will be promoted with public and private landowners to maintain existing road densities in Zones 1 and 2, protect wolf dispersal corridors, and manage forests for deer and beaver (WI DNR 1999, pp. 4, 22–23; 2006a, pp. 15–17). Furthermore, in Zone 1, a year-round prohibition on tree harvest within 330 feet (100 m) of den sites, and seasonal restrictions to reduce disturbance within one-half mile of dens, will be WI DNR policy on public lands and will be encouraged on private lands (WI DNR 1999, p. 23; 2006a, p. 17).



Figure 3. Wisconsin wolf management zones.



The 1999 WI Plan contains, and the 2006 update retains, other recommendations that will provide protection to assist in maintenance of a viable wolf population in the State: (1) Continue the protection of the species as a “protected wild animal” with penalties similar to those for unlawfully killing large game species (fines of \$1,000–\$2,000, loss of hunting privileges for 3–5 years, and a possible 6-month jail sentence), (2) maintain closure zones where coyotes cannot be shot during deer hunting season in Zone 1, (3) legally protect wolf dens under the Wisconsin Administrative Code, (4) require State permits to possess a wolf or wolf-dog hybrid, and (5) establish a restitution value to be levied in addition to fines and other penalties for wolves that are illegally killed (WI DNR 1999, pp. 21, 27–28, 30–31; 2006a, pp. 3–4).

The 2006 update of the WI Plan continues to emphasize the need for public education efforts that focus on living with a recovered wolf population, ways to manage wolves and wolf-human conflicts, and the ecosystem role of

wolves. The Plan continues the State reimbursement for depredation losses (including dogs and missing calves), citizen stakeholder involvement in the wolf management program, and coordination with the Tribes in wolf management and investigation of illegal killings (WI DNR 1999, pp. 24, 28–29; 2006a, pp. 22–23).

Given the decline and ultimate termination in Federal funding for wolf monitoring that would occur upon delisting, Wisconsin and Michigan DNRs are seeking an effective, yet cost-efficient, method for detecting wolf population changes to replace the current labor-intensive and expensive monitoring protocols. Both DNRs have considered implementing a “Minnesota-type” wolf survey. Such methodology is less expensive for larger wolf populations than the intensive radio monitoring and track survey methods currently used by the two States, and if the wolf population continues to grow there will be increased need to develop and implement a less expensive method. However, each State conducted

independent field testing of the Minnesota method several years ago and found that method to be unsuitable for both States’ lower wolf population density and uneven pack distribution. In both States the application of that method resulted in an overestimate of wolf abundance, possibly due to the more patchy distribution of wolves and packs in these States and the difficulty in accurately delineating occupied wolf range in areas where wolf pack density is relatively low in comparison to Minnesota and where agricultural lands are interspersed with forested areas (Wiedenhoef 2005, pp. 11–12; Beyer in litt. 2006b).

Both States remain interested in developing accurate but less costly alternate survey methods. WI DNR might test other methods following any Federal delisting, but the State will not replace its traditional radio tracking/snow tracking surveys during the 5-year post-delisting monitoring period (Wydeven in litt. 2006b). The 2006 update to the Wisconsin Wolf Management Plan has not changed the

WI DNR's commitment to annual wolf population monitoring in a manner that ensures accurate and comparable data (WI DNR 1999, pp. 19–20), and we are confident that adequate annual monitoring will continue for the foreseeable future.

*Depredation Control in Wisconsin*—The rapidly expanding Wisconsin wolf population has resulted in an increased need for depredation control. From 1979 through 1989, there were only five cases (an average of 0.4 per year) of verified wolf depredations in Wisconsin. Between 1990 and 1997, there were 27 verified depredation incidents in the State (an average of 3.4 per year), and 82 incidents (an average of 16.4 per year) occurred from 1998 to 2002. Depredation incidents increased to 23 cases (including 50 domestic animals killed and 4 injured) in 2003, 35 cases (53 domestic animals killed, 3 injured, and 6 missing) in 2004, and to 45 cases (53 domestic animals killed and 11 injured) in 2005 (Wydeven and Wiedenhoft 2004a, pp. 2–3, 7–8 Table 3; Wydeven *et al.* 2005b, p. 7; Wydeven *et al.* 2006b, p. 7). From 2005 to 2008, depredation incidents continued to increase, with 52 cases (92 domestic animals killed (includes 50 chickens) and 16 injured) in 2006, 60 cases (51 domestic animals killed, 18 injured, and 14 missing) in 2007, and 57 cases (67 domestic animals killed and 10 injured) in 2008 (Wydeven *et al.* 2007a, p. 7; Wydeven and Wiedenhoft 2008, pp. 8, 25–32; Wydeven *et al.* 2009a, p. 6). Similar levels of depredations continued to occur in 2009, with 55 cases (65 domestic animals killed and 11 injured), but increased again to 81 cases (99 domestic animals killed and 20 injured) in 2010 (Wydeven *et al.* 2010, pp. 9–10; Wydeven *et al.* 2011, p. 3).

The number of farms experiencing wolf depredations has increased from 5 farms in 2000, to 28–32 farms from 2007 to 2009, and to 47 farms in 2010, a nearly ten-fold increase in the number of farms experiencing depredations during the last decade. The number of counties with wolf depredations on farms also grew during that time period from 5 to 17 counties, indicating that wolf depredation problems on farms are continuing to expand (Wydeven in litt. 2009; Wydeven *et al.* 2009a, p. 23; Wydeven *et al.* 2011, p. 3). Between 1995 and 2002, an average of 7 percent of packs in Wisconsin were involved in livestock depredations (Wydeven *et al.* 2004, p. 36), and between 2002 and 2010, an average of 13 percent (from 7 to 17) of the State's packs were involved in livestock depredation (WI DNR data). More aggressive lethal controls possible

in 2007 and 2008 through State management following a temporary period of Federal delisting appear to have started to stabilize levels of livestock depredation in 2007–09, but loss of those control methods allowed major increases in levels of depredation in 2010.

A significant portion of depredation incidents in Wisconsin involve attacks on dogs, primarily those engaged in bear hunting activities or dogs being trained in the field for hunting. In most cases, these have been hunting dogs that were being used for, or being trained for, hunting bears, bobcats, coyotes, and snowshoe hare (Ruid *et al.* 2009, pp. 285–286). It is believed that the dogs entered the territory of a wolf pack and may have been close to a den, rendezvous site, or feeding location, thus triggering an attack by wolves defending their territory or pups. The frequency of attacks on hunting dogs has increased as the State's wolf population has grown. Between 1986 and 2010, wolves in Wisconsin killed 206 dogs and injured 80 (WI DNR data files and summary of wolf survey reports). Generally about 90 percent of dogs killed were hunting hounds, and about 50 percent of dogs injured were pet dogs attacked near homes (Ruid *et al.* 2009).

More than 80 percent of the dog kills occurred since 2001, with an average of 17.2 dogs killed annually (range 6 to 25 dogs killed per year), and 6.8 injured each year (range 1 to 14 dogs) during the period 2001–10 (WI DNR files). Data on recent depredations in 2009 and 2010 show a continued increase in wolf attacks on dogs, with 23 dogs killed and 11 injured by 20 wolf packs (12 percent of Wisconsin packs) in 2009, and 24 dogs killed and 14 injured by 21 wolf packs in 2010 (Wydeven *et al.* 2010, pp. 51–52; Wydeven *et al.* 2011 p. 3). While the WI DNR compensates dog owners for mortalities and injuries to their dogs, the DNR takes no action against the depredating pack unless the attack was on a dog that was leashed, confined, or under the owner's control on the owner's land. Instead, the DNR issues press releases to warn bear hunters and bear dog trainers of the areas where wolf packs have been attacking bear dogs (WI DNR 2008, p. 5) and provides maps and advice to hunters on the WI DNR web site (see <http://www.dnr.state.wi.us/org/land/er/mammals/wolf/dogdepred.htm>). In 2010, 14 wolf attacks on dogs had occurred near homes, which was the highest level seen of this type of depredation (Wydeven *et al.* 2011, p. 3).

*Post-delisting Depredation Control in Wisconsin*—Following Federal delisting, wolf depredation control in

Wisconsin will be carried out according to the 2006 Updated Wisconsin Wolf Management Plan (WI DNR 2006a, pp. 19–23), Guidelines for Conducting Depredation Control on Wolves in Wisconsin Following Federal Delisting (WI DNR 2008), and any Tribal wolf management plans or guidelines that may be developed for reservations in occupied wolf range. The 2006 updates have not significantly changed the 1999 State Plan, and the State wolf management goal of 350 wolves outside of Indian reservations (WI DNR 2006a, p. 3) is unchanged. Verification of wolf depredation incidents will continue to be conducted by USDA–APHIS–Wildlife Services, working under a cooperative agreement with WI DNR, or at the request of a Tribe, depending on the location of the suspected depredation incident. If determined to be a confirmed or probable depredation by a wolf or wolves, one or more of several options will be implemented to address the depredation problem. These options include technical assistance, loss compensation to landowners, translocating or euthanizing problem wolves, and private landowner control of problem wolves in some circumstances (WI DNR 2006a, pp. 3–4, 20–22).

Technical assistance, consisting of advice or recommendations to prevent or reduce further wolf conflicts, will be provided. This may also include providing to the landowner various forms of noninjurious behavior modification materials, such as flashing lights, noise makers, temporary fencing, and fladry (a string of flags used to contain or exclude wild animals). Monetary compensation is also provided for all verified and probable losses of domestic animals and for a portion of documented missing calves (WI DNR 2006a, pp. 22–23).

The WI DNR compensates livestock and pet owners for confirmed losses to depredating wolves. The compensation is made at full market value of the animal (up to a limit of \$2,500 for dogs) and can include veterinarian fees for the treatment of injured animals (WI DNR 2006c 12.54). Compensation costs have been funded from the endangered resources tax check-off and sales of the endangered resources license plates. Current Wisconsin law requires the continuation of the compensation payment for wolf depredation regardless of Federal listing or delisting of the species (WI DNR 2006c 12.50). In recent years annual depredation compensation payments have ranged from \$68,907.88 (2007) to \$203,943.51 (2010). From 1985 through December 24, 2010, the WI DNR had spent \$1,083,162.62 on

reimbursement for damage caused by wolves in the State, with 82 percent of that total spent since 2000 ([http://dnr.wi.gov/org/land/er/mammals/wolf/pdfs/wolf\\_damage\\_payments\\_2010.pdf](http://dnr.wi.gov/org/land/er/mammals/wolf/pdfs/wolf_damage_payments_2010.pdf)).

For depredation incidents in Wisconsin Zones 1 through 3, where all wolf packs currently reside, wolves may be trapped by Wildlife Services or WI DNR personnel and, if feasible, translocated and released at a point distant from the depredation site. If wolves are captured adjacent to an Indian reservation or a large block of public land, the animals may be translocated locally to that area. As noted above, long-distance translocating of depredating wolves has become increasingly difficult in Wisconsin and is likely to be used infrequently in the future as long as the off-reservation wolf population is above 350 animals. In most wolf depredation cases where technical assistance and nonlethal methods of behavior modification are judged to be ineffective, wolves will be shot or trapped and euthanized by Wildlife Services or DNR personnel. Trapping and euthanizing will be conducted within a 1-mi (1.6-km) radius of the depredation in Zones 1 and 2, and within a 5-mi (8-km) radius in Zone 3. There is no distance limitation for depredation control trapping in Zone 4, and all wolves trapped in Zone 4 will be euthanized, rather than translocated (WI DNR 2006a, pp. 22–23).

Following Federal delisting, Wisconsin landowners who have had a verified wolf depredation will be able to obtain limited-duration permits from WI DNR to kill a limited number of depredating wolves on land they own or lease, based on the size of the pack causing the local depredations (WI DNR 2008, p. 8). Such permits would be issued to: (1) Landowners with verified permits on their property within the last 2 years; (2) landowners within 1 mile of properties with verified wolf depredations during the calendar year; (3) landowners with vulnerable livestock within WI DNR-designated proactive control areas; (4) landowners with human safety concerns on their property, and (5) landowners with verified harassment of livestock on their property (WI DNR 2008, p. 8). Limits on the number of wolves to control will be based on the estimated number of wolves in the pack causing depredation problems. In addition, landowners and lessees of land statewide will be allowed to kill a wolf without obtaining a permit “in the act of killing, wounding, or biting a domestic animal,” the incident must be reported to a conservation warden within 24 hours and the landowners are required to turn

any dead wolves over to the WI DNR (WI DNR 2006a, pp. 22–23; WI DNR 2008, p. 6). During the 19 months in 2007 and 2008 when wolves were federally delisted, 5 wolves were shot in the act of depredations on domestic animals, and 2 wolves were shot by 1 landowner out of 67 permits issued. One wolf was shot in the act of attack on domestic animals during 2 months when wolves were delisted in 2009.

The updated Wisconsin Plan also envisions the possibility of intensive control management actions in sub-zones of the larger wolf management zones (WI DNR 2006a, pp. 22–23). Triggering actions and type of controls planned for these “proactive control areas” are listed in recent versions of the WI DNR depredation control guidelines (WI DNR 2008, pp. 7–9). Controls on these actions would be considered on a case-by-case basis to address specific problems, and would likely be carried out only in areas that lack suitable habitat, have extensive agricultural lands with little forest interspersed, in urban or suburban settings, and only when the State wolf population is well above the management goal of 350 wolves outside Indian reservations in late-winter surveys. The use of intensive population management in small areas will be adapted as experience is gained with implementing and evaluating localized control actions (Wydeven 2006, pers. comm.).

We have evaluated future lethal depredation control based upon verified depredation incidents over the last decade and the impacts of the implementation of similar lethal control of depredating wolves under 50 CFR 17.40(d) for Minnesota, § 17.40(o) for Wisconsin and Michigan, and section 10(a)(1)(A) of the Act for Wisconsin and Michigan. Under those authorities, WI DNR and Wildlife Services trapped and euthanized 17 wolves in 2003; 24 in 2004; 29 in 2005; 18 in 2006; 37 in 2007; 39 in 2008; 9 in 2009; and 16 in 2010 (WI DNR 2006a, p. 32; Wydeven *et al.* 2008, pp. 8–9; Wydeven *et al.* 2009, pp. 6–7; Wydeven *et al.* 2010, p. 15; Wydeven *et al.* 2011, p. 3). Although these lethal control authorities applied to Wisconsin and Michigan DNRs for only a portion of 2003 (April through December) and 2005 (all of January for both States; April 1 and April 19, for Wisconsin and Michigan respectively, through September 13), they covered nearly all of the verified wolf depredations during 2003–05, and thus provide a reasonable measure of annual lethal depredation control. Lethal control authority only occurred for about 3.5 months in 2006.

For 2003, 2004, and 2005, this represents 5.1 percent, 6.4 percent, 7.4 percent (including the several possible wolf-dog hybrids), respectively, of the late-winter population of Wisconsin wolves during the previous winter. Note that some of the wolves euthanized after August 1 were young-of-the-year who were not present during the late-winter survey, so the cited percentages are overestimates.

This level of lethal depredation control was followed by a wolf population increase of 11 percent from 2003 to 2004, 17 percent from 2004 to 2005, and 7 percent from 2005 to 2006 (Wydeven and Jurewicz 2005, p. 5; Wydeven *et al.* 2006a, p. 10). Limited lethal control authority was granted to WI DNR in 2006 by a section 10 permit resulting in removal of 18 wolves (3.9 percent of winter wolf population), and this permit remained in effect for 3.5 months (Wydeven *et al.* 2007, p. 7). Lethal depredation control was again authorized in the State while wolves were delisted in 2007 (9.5 months) and 2008 (9 months). During those times, 40 and 43 wolves, respectively, were killed for depredation control (by Wildlife Services or by legal landowner action), representing 7 and 8 percent of the late-winter population of Wisconsin wolves during the previous year.

This level of lethal depredation control was followed by a wolf population increase of 0.5 percent from 2007 to 2008, and 12 percent from 2008 to 2009 (Wydeven and Wiedenhoef 2008, pp. 19–22; Wydeven *et al.* 2009a, p. 6). Authority for lethal control on depredating wolves occurred for only 2 months in 2009. During that time, eight wolves were euthanized for depredation control by USDA–WS, and one wolf was shot by a landowner; additionally, later in 2009 after relisting, a wolf was captured and euthanized by USDA–WS for human safety concerns (Wydeven *et al.* 2010, p. 15). Thus in 2009, 10 wolves, or 2 percent of the winter wolf population, was removed in control activities.

The Wisconsin wolf population in winter 2010 grew to 690 wolves, an increase of 8 percent from the wolf population in 2009 (Wydeven *et al.* 2010, pp. 12–13). In 2010, authority for lethal control of wolves depredating livestock was not available in Wisconsin, but 16 wolves or 2 percent of the winter population were removed for human safety concerns (Wydeven *et al.* 2011, p. 3). This provides strong evidence that this form and magnitude of depredation control will not adversely impact the viability of the Wisconsin wolf population. The locations of depredation incidents

provide additional evidence that lethal control will not have an adverse impact on the State's wolf population. Most livestock depredations are caused by packs near the northern forest-farm land interface. Few depredations occur in core wolf range and in large blocks of public land. Thus, lethal depredation control actions will not impact most of the Wisconsin wolf population (WI DNR 2006a, p. 30).

Control actions in Wisconsin also resulted in removal of wolf-dog hybrids from the wild that had begun associating with packs. Wolf-dog hybrid removal in depredation control activity by USDA-WS included 3 in 2005; 1 in 2007; 2 in 2008; and 1 in 2010 (WI DNR files).

One substantive change to lethal control that will result from Federal delisting is the ability of a small number of private landowners, whose farms have a history of recurring wolf depredation, to obtain DNR permits to kill depredating wolves (WI DNR 2006a, p. 23; WI DNR 2008, p. 8). During the time wolves were federally delisted from March 12, 2007, through September 29, 2008, the DNR issued 67 such permits, resulting in 2 wolves being killed. Some landowners received permits more than once, and permits were issued for up to 90 days at a time and restricted to specific calendar years. During that same time period, under Wisconsin depredation management guidelines, landowners were allowed to shoot wolves in the act of attacks on domestic animals on private land without a permit; under that authority, landowners killed a total of five wolves. The death of these seven additional wolves—only one percent of the State's wolves in 2008—did not affect the viability of the population. Another substantive change after delisting may be potential proactive trapping or "intensive control" of wolves in limited areas as described above. We are confident that the number of wolves killed by these actions will not impact the long-term viability of the Wisconsin wolf population, because generally less than 15 percent of packs cause depredations that would initiate such controls, and "proactive" controls will be carried out only if the State's late-winter wolf population exceeds 350 animals outside Indian reservations.

The State's current guidelines for conducting depredation control actions say that no control trapping will be conducted on wolves that kill "dogs that are free-roaming, roaming at large, hunting, or training on public lands, and all other lands except land owned or leased by the dog owner" (WI DNR 2008, p. 5). Controls would be applied

on wolves depredating pet dogs attacked near homes and wolves attacking livestock, which in 2010 included 25 packs attacking livestock (23 packs that were also documented in the previous winter surveys), 8 packs attacking dogs at homes, and 5 packs attacking both livestock and dogs. Thus control would have been applied to 31 packs (17 percent of State packs) previously detected and 2 new packs. Because of these State-imposed limitations, we believe that lethal control of wolves depredating on hunting dogs will be rare and, therefore, will not be a significant additional source of mortality in Wisconsin.

Lethal control of wolves that attack captive deer is included in the WI DNR depredation control program, because farm-raised deer are considered to be livestock under Wisconsin law (WI DNR 2008, pp. 5–6; 2006c, 12.52). However, Wisconsin regulations for deer farm fencing have been strengthened, and it is unlikely that more than an occasional wolf will need to be killed to end wolf depredations inside deer farms in the foreseeable future. Claims for wolf depredation compensation are rejected if the claimant is not in compliance with regulations regarding farm-raised deer fencing or livestock carcass disposal (Wisconsin Statutes 90.20 & 90.21, WI DNR 2006c 12.54).

Data from verified wolf depredations in recent years indicate that depredation on livestock is likely to increase as long as the Wisconsin wolf population increases in numbers and range. Wolf packs establishing in more marginal habitat with high acreage of pasture land are more likely to become depredators (Treves *et al.* 2004, pp. 121–122). Most large areas of forest land and public lands are included in Wisconsin Wolf Management Zones 1 and 2, and they have already been colonized by wolves. Therefore, new areas likely to be colonized by wolves in the future will be in Zones 3 and 4, where they will be exposed to much higher densities of farms, livestock, and residences. During 2008, of farms experiencing wolf depredation, 25 percent (8 of 32) were in Zone 3, yet only 4 percent of the State wolf population occurs in this zone (Wydeven *et al.* 2009a, p. 23). Further expansion of wolves into Zone 3 would likely lead to an increase in depredation incidents and an increase in lethal control actions against Zone 3 wolves. However, these Zone 3 mortalities will have no impact on wolf population viability in Wisconsin because of the much larger wolf populations in Zones 1 and 2.

For the foreseeable future, the wolf population in Zones 1 and 2 will continue to greatly exceed the recovery goal in the Recovery Plan for the Eastern Timber Wolf of 200 late-winter wolves for an isolated population and 100 wolves for a subpopulation connected to the larger Minnesota population, regardless of the extent of wolf mortality from all causes in Zones 3 and 4. Ongoing annual wolf population monitoring by WI DNR will provide timely and accurate data to evaluate the effects of wolf management under the Wisconsin Plan.

The possibility of a public harvest of wolves is acknowledged in the Wisconsin Wolf Management Plan and in plan updates (WI DNR 1999, Appendix D; 2006c, p. 23). However, the question of whether a public harvest will be initiated and the details of such a harvest are far from resolved. Public attitudes toward a wolf population in excess of 350 would have to be fully evaluated, as would the impacts from other mortalities, before a public harvest could be initiated.

The Wisconsin Conservation Congress, a group that advises the WI DNR on issues of fishing and hunting regulations, held hearings in 2008 (while wolves were federally delisted in the WGL) to gather information on the public's attitudes toward a public harvest of wolves in the State. Of the people attending those meetings, 86 percent recommended that efforts begin to develop public harvest regulations for wolves in the State, indicating a strong interest among hunters and anglers to begin such development. Establishing a public harvest, however, would be preceded by extensive public input, including public hearings, and would require legislative authorization and approval by the Wisconsin Natural Resources Board. Because of the steps that must precede a public harvest of wolves and the uncertainty regarding the possibility of, and the details of, any such program, we consider public harvest of Wisconsin wolves to be highly speculative at this time. The Service will closely monitor any steps taken by States and Tribes within the WGL DPS to establish any public harvest of wolves during our post-delisting monitoring program.

Future updates for the Wisconsin wolf management and conservation plan will likely contain more specific language on any potential public harvest for the State. The WI DNR is committed to maintaining a wolf population at 350 wolves outside of Indian reservations, which translates to a statewide population of 361 to 385 wolves in late winter. No harvest would be considered

if the wolf population fell below this goal (WI DNR 1999, pp. 15, 16). Any harvest would consist of limited permits on limited portions of the wolf range to reduce wolf-human conflict, and extensive areas in wolf range would be closed to harvest of wolves (WI DNR 1999, p. 21). Also, the fact that the Wisconsin Plan calls for State delisting of the wolf as a threatened species if the population falls to fewer than 250 for 3 years provides a strong assurance that any future public harvest is not likely to threaten the persistence of the population (WI DNR 1999, pp. 15–17). Based on wolf population data, the current Wisconsin Plan and the 2006 updates, we believe that any public harvest plan would continue to maintain the State wolf population well above the recovery goal of 200 wolves in late winter.

#### The Michigan Wolf Management Plan

In 1997, the Michigan DNR finalized the Michigan Gray Wolf Recovery and Management Plan (MI DNR 1997). That plan was developed when the number of wolves in the State was relatively small, and focused on recovery. In 2001, the MI DNR began reevaluating the 1997 Plan and appointed a committee to evaluate wolf recovery and management in the State. As a result of that evaluation, MI DNR concluded that the 1997 Plan needed revising, which prompted a more formal review, including extensive stakeholder input. Recognizing that wolf recovery had been achieved in Michigan, additional scientific knowledge had been gained, and new social issues had arisen since the 1997 Plan was drafted, the focus of the revised plan shifted from a recovery plan to a wolf management plan. To assist in this endeavor, the DNR convened a Michigan Wolf Management Roundtable, composed of a diverse group of citizens spanning the spectrum of those interested in, and impacted by, wolf recovery and management in Michigan, including Tribal entities and organizations focused on agriculture, hunting and trapping, the environment, animal protection, law enforcement and public safety, and tourism.

The Roundtable was asked to review the 1997 wolf management goal, to set priorities for management issues, and to recommend strategic goals or policies the DNR should use in addressing the management issues. The Roundtable provided “guiding principles” for managing wolves and wolf-related issues following Federal delisting (Michigan Wolf Management Roundtable 2006, pp. 6–7). Those guiding principles strongly influenced

the 2008 Michigan Wolf Management Plan (MI Plan) (MI DNR 2008a).

The 2008 MI Plan describes the wolf recovery goals and management actions needed to maintain a viable wolf population in the UP of Michigan, while facilitating wolf-related benefits and minimizing conflicts. The four principal goals are to “1) maintain a viable Michigan wolf population above a level that would warrant its classification as threatened or endangered; 2) facilitate wolf-related benefits; 3) minimize wolf-related conflicts; and 4) conduct science-based wolf management with socially acceptable methods” (MI DNR 2008a, p. 22). The Michigan Plan details wolf management actions, including public education and outreach activities, annual wolf population and health monitoring, research, depredation control, ensuring adequate legal protection for wolves, and prey and habitat management. It does not address the potential need for wolf recovery or management in the Lower Peninsula, nor wolf management within Isle Royale National Park (where the wolf population is fully protected by the National Park Service).

As with the WI Plan, the MI DNR has chosen to manage the State’s wolves as though they are an isolated population that receives no genetic or demographic benefits from immigrating wolves, even though their population will continue to be connected with populations in Minnesota, Wisconsin, and Canada. The Michigan wolf population must exceed 200 wolves in order to achieve the Plan’s first goal of maintaining a viable wolf population in the UP. This number is consistent with the Federal Recovery Plan for the Eastern Timber Wolf’s definition of a viable, isolated wolf population (USFWS 1992, p. 25). The MI Plan, however, clearly states that 200 wolves is not the target population size, and that a larger population may be necessary to meet the other goals of the Plan. Therefore, the State will maintain a wolf population that will “provide all of the ecological and social benefits valued by the public” while “minimizing and resolving conflicts where they occur” (MI DNR 2008a, pp. 22–23). We strongly support this approach, as it provides assurance that a viable wolf population will remain in the UP regardless of the future fate of wolves in Wisconsin or Ontario.

The 2008 Michigan Plan identifies wolf population monitoring as a priority activity, and specifically states that the MI DNR will monitor wolf abundance annually for at least 5 years post-delisting (MI DNR 2008a, pp. 31–32). This includes monitoring to assess wolf presence in the northern Lower

Peninsula. As discussed previously, the size of the wolf population in Michigan is determined by extensive radio and snow tracking surveys. Recently the MI DNR also conducted a field evaluation of a less expensive “Minnesota-type” wolf survey. However, similar to WI DNR’s experience, the evaluation concluded that the method overestimated wolf numbers, and is not suitable for use on the State’s wolf population as it currently is distributed (Beyer in litt. 2006b).

From 1989 through 2006, the MI DNR attempted to count wolves throughout the entire UP. As the wolf population increased, this method became more difficult. In the winter of 2006–07, the MI DNR implemented a new sampling approach based on an analysis by Potvin *et al.* (2005, p. 1668) to increase the efficiency of the State survey. The new approach is based on a geographically based stratified random sample and produces an unbiased, regional estimate of wolf abundance. The UP was stratified into three sampling areas, and within each stratum the DNR intensively surveys roughly 40 to 50 percent of the wolf habitat area annually. Computer simulations have shown that such a geographically stratified monitoring program will produce unbiased and precise estimates of the total wolf population, which can be statistically compared to estimates derived from the previous method to detect significant changes in the UP wolf population (Beyer in litt. 2006b, see attachment by Drummer; Lederle in litt. 2006; Roell *et al.* 2009, p. 3).

Another component of wolf population monitoring is monitoring wolf health. The MI DNR will continue to monitor the impact of parasites and disease on the viability of wolf populations in the State through necropsies of dead wolves and analyzing biological samples from captured live wolves. Prior to 2004, MI DNR vaccinated all captured wolves for canine distemper and parvovirus and treated them for mange. These inoculations were discontinued to provide more natural biotic conditions and to provide biologists with an unbiased estimate of disease-caused mortality rates in the population (Roell in litt. 2005b). Since diseases and parasites are not currently a significant threat to the Michigan wolf population, the MI DNR is continuing the practice of not actively managing disease. If monitoring indicates that diseases or parasites may pose a threat to the wolf population, the MI DNR will again consider more active management similar to that conducted prior to 2004.

The 2008 Plan includes maintaining habitat and prey necessary to sustain a viable wolf population in the State as a management component. This includes maintaining prey populations required for a viable wolf population while providing for sustainable human uses, maintaining habitat linkages to allow for wolf dispersal, and minimizing disturbance at known, active wolf dens (MI DNR 2008a, pp. 36–41).

The Plan does not determine whether a public harvest will be used as a management strategy in Michigan, but it discusses developing a “socially and biologically responsible policy regarding public harvest” (MI DNR 2008a, p. 65). Instituting public harvest during a regulated season would first require that the wolf be classified as a “game animal” in the State. Game-animal status in Michigan may be designated only by the State Legislature and, additionally, only the State Legislature could authorize the first harvest season. If such designation and authorization were conferred, the Michigan Natural Resources Commission would then need to enact regulations pertaining to the methods of a public harvest.

To minimize illegal take, the 2008 Plan calls for enacting and enforcing regulations to ensure adequate legal protection for wolves in the State. Under State regulations, wolves could be classified as a threatened, endangered, game, or protected animal, all of which prohibit killing (or harming) the species except under a permit, license, or specific conditions. As discussed above, designating a species as a “game animal” would require action by the State Legislature. Michigan reclassified wolves from endangered to threatened in June 2002, and in April 2009, removed gray wolves from the State’s threatened and endangered species list and amended the Wildlife Conservation Order to grant “protected animal” status to the gray wolf in the State (Roell 2009, pers. comm.). A person who commits a violation regarding the possession or taking of most wildlife species with the four legal designations (threatened, endangered, game, or protected animal) in Michigan is guilty of a misdemeanor punishable by imprisonment for not more than 90 days, or a fine of not less than \$100 or more than \$1,000, or both. Penalties may also include costs of prosecution, loss of hunting privileges, and reimbursing the value of the animal (\$1,500 for a threatened or endangered species, \$100 to \$500 for most game species, and \$100 for protected animals) (MI DNR 2008a, p. 35).

The 2008 Plan emphasizes the need for public education efforts that focus on living with a recovered wolf population and ways to manage wolves and wolf-human interaction (both positive and negative). The Plan recommends continuing reimbursement for depredation losses, citizen stakeholder involvement in the wolf management program, continuing important research efforts, and minimizing the impacts of captive wolves and wolf-dog hybrids on the wild wolf population (MI DNR 2008a, pp. 31, 59, 61, and 66).

The 2008 Michigan Plan calls for establishing a wolf management advisory group that would meet annually to monitor the progress made toward implementing the Plan. Furthermore, the Plan will be reviewed and updated at 5-year intervals, to address “ecological, social, and regulatory” changes (MI DNR 2008a, p. 66). The plan also addresses currently available and potential new sources of funding to offset costs associated with wolf management. The MI DNR has long been an innovative leader in wolf recovery efforts, exemplified by its initiation of the nation’s first attempt to reintroduce wild wolves to vacant historical wolf habitat in 1974 (Weise *et al.* 1975). The MI DNR’s history of leadership in wolf recovery and its repeated written commitments to ensure the continued viability of a Michigan wolf population above a level that would trigger State or Federal listing as threatened or endangered further reinforces that the revised 2008 Michigan Wolf Management Plan will provide adequate regulatory mechanisms for Michigan wolves. The DNR’s primary goal remains to conduct management to maintain the wolf population in Michigan above the minimum size that is biologically required for a viable, isolated population and to provide for ecological and social benefits valued by the public while resolving conflicts where they occur (MI DNR 2008a, p. 22).

Depredation Control in Michigan—Data from Michigan show a general increase in confirmed events of wolf depredations on livestock (Table 2). These livestock depredations occurred at 59 different UP farms (approximately 7 percent of the existing farms); 16 (27 percent) of those 59 farms have experienced more than one depredation event. Over 80 percent of the depredation events were on cattle, with the rest on sheep, poultry, rabbits, and captive cervids (Roell *et al.* 2009, pp. 9, 11). In 2010, 26 (57 percent) of the depredation events occurred on a single farm. The relationship between the

number of wolves and the number of depredation events suggests that for every 100 additional wolves in the population there will be about 3 additional livestock depredation events per year (Roell *et al.* 2010, p. 6).

TABLE 2—NUMBER OF VERIFIED LIVESTOCK DEPREDATION EVENTS BY WOLVES IN MICHIGAN BY YEAR.

Year	Number of animals killed
1998 .....	3
1999 .....	1
2000 .....	5
2001 .....	3
2002 .....	5
2003 .....	13
2004 .....	11
2005 .....	5
2006 .....	10
2007 .....	14
2008 .....	14
2009 .....	12
2010 .....	46

Michigan has not experienced as high a level of attacks on dogs by wolves as Wisconsin, although a slight increase in such attacks has occurred over the last decade. Yearly losses vary, and actions of a single pack of wolves can be an important influence. In Michigan, there is not a strong relationship between wolf depredation on dogs and wolf abundance (Roell *et al.* 2010, p. 7). The number of dogs killed in the State between 1996 and 2010 was 34; 12 additional dogs were injured in wolf attacks during that same period. Of the 34 wolf-related dog deaths during that time, 50 percent involved hounds used to hunt bears (Roell 2010, pers. comm.). Similar to Wisconsin, MI DNR has guidelines for its depredation control program, stating that lethal control will not be used when wolves kill dogs that are free-roaming, hunting, or training on public lands. Lethal control of wolves, however, would be considered if wolves have killed confined pets and remain in the area where more pets are being held (MI DNR 2005a, p. 6). However, in 2008, the Michigan Legislature passed a law that would allow dog owners or their designated agents to remove, capture, or, if deemed necessary, use lethal means to destroy a gray wolf that is in the act of preying upon the owner’s dog, which includes dogs free-roaming or hunting on public lands.

During the several years that lethal control of depredating wolves had been conducted in Michigan, there was no evidence of resulting adverse impacts to the maintenance of a viable wolf population in the UP. A total of 41 wolves were killed by the MI DNR and



USDA–Wildlife Services in response to depredation events during the time period when permits or special rules were in effect or while wolves were not on the Federal list of threatened and endangered species (Roell *et al.* 2010, p. 8). Wolves were euthanized as follows: 4 (2003), 5 (2004), 2 (2005), 7 (2006), 14 (2007), 8 (2008), and 1 (during 2 months in 2009) (Beyer *et al.* 2006, p. 88; Roell *in litt.* 2006, p. 1; Roell *et al.* 2010, p. 19; Roell 2010, pers. comm.). This represents 1.2 percent, 1.7 percent, 0.5 percent, 1.6 percent, 2.7 percent, 2.5 percent, and 0.2 percent, respectively, of the UP's late-winter population of wolves during the previous winter. Following this level of lethal depredation control, the UP wolf population increased 12 percent from 2003 to 2004, 13 percent from 2004 to 2005, 7 percent from 2005 to 2006, 17 percent from 2006 to 2007, 2 percent from 2007 to 2008, and 11 percent from 2008 to 2009, demonstrating that the wolf population continues to increase at a healthy rate (Huntzinger *et al.* 2005, p. 6; MI DNR 2006a, Roell *et al.* 2009, p. 4). Lethal control of wolves during livestock depredation was not available in 2010 or 2011.

*Post-delisting Depredation Control in Michigan*—Following Federal delisting, wolf depredation control in Michigan would be carried out according to the 2008 Michigan Wolf Recovery and Management Plan (MI DNR 2008) and any Tribal wolf management plans that may be developed in the future for reservations in occupied wolf range.

To provide depredation control guidance when lethal control is an option, MI DNR has developed detailed instructions for incident investigation and response (MI DNR 2005a). Verification of wolf depredation incidents will be conducted by MI DNR or USDA–APHIS–Wildlife Services personnel (working under a cooperative agreement with MI DNR or at the request of a Tribe, depending on the location) who have been trained in depredation investigation techniques. The MI DNR specifies that the verification process will use the investigative techniques that have been developed and successfully used in Minnesota by Wildlife Services (MI DNR 2005a, Append. B, pp. 9–10). Following verification, one or more of several options will be implemented to address the depredation problem. Technical assistance, consisting of advice or recommendations to reduce wolf conflicts, will be provided. Technical assistance may also include providing to the landowner various forms of noninjurious behavior modification materials, such as flashing

lights, noise makers, temporary fencing, and fladry.

Trapping and translocating depredating wolves has been used in the past, resulting in the translocation of 23 UP wolves during 1998–2003 (Beyer *et al.* 2006, p. 88), but as with Wisconsin, suitable relocation sites are becoming rarer, and there is local opposition to the release of translocated depredators. Furthermore, none of the past translocated depredators have remained near their release sites, making this a questionable method to end the depredation behaviors of these wolves (MI DNR 2005a, pp. 3–4). Therefore, reducing depredation problems by relocation is no longer recommended as a management tool in Michigan (MI DNR 2008a, p. 57).

Lethal control of depredating wolves is likely to be the most common future response in situations when improved livestock husbandry and wolf behavior modification techniques (for example, flashing lights, noise-making devices) are judged to be inadequate. As wolf numbers continue to increase on the UP, the number of verified depredations will also increase, and will probably do so at a rate that exceeds the rate of wolf population increase. This will occur as wolves increasingly disperse into and occupy areas of the UP with more livestock and more human residences, leading to additional exposure to domestic animals. In a previous application for a lethal take permit under section 10(a)(1)(A) of the Act, MI DNR requested authority to euthanize up to 10 percent of the late-winter wolf population annually (MI DNR 2005b, p. 1). However, based on 2003–05 and 2007–09 depredation data, it is likely that significantly less than 10 percent lethal control will be needed over the next several years.

The MI Plan provides recommendations to guide management of various conflicts caused by wolf recovery, including depredation on livestock and pets, human safety, and public concerns regarding wolf impacts on other wildlife. We view the MI Plan's depredation and conflict control strategies to be conservative, in that they commit to nonlethal depredation management whenever possible, oppose preventative wolf removal where problems have not yet occurred, encourage incentives for best management practices that decrease wolf-livestock conflicts without impacting wolves, and support closely monitored and enforced take by landowners of wolves "in the act of livestock depredation" or under limited permits if depredation is confirmed and nonlethal methods are determined to be

ineffective. Based on these components of the revised MI Plan and the stated goal for maintaining wolf populations at or above recovery goals, the Service believes any wolf management changes implemented following delisting would not be implemented in a manner that results in significant reductions in Michigan wolf populations. The MI DNR remains committed to ensuring a viable wolf population above a level that would trigger relisting as either threatened or endangered in the future (MI DNR 2008a, p. 9).

Similar to Wisconsin, Michigan livestock owners are compensated when they lose livestock as a result of a confirmed wolf depredation. Currently there are two complementary compensation programs in Michigan, one funded by the MI DNR and implemented by Michigan Department of Agriculture (MI DA) and another set up through donations (from Defenders of Wildlife and private citizens) and administered by the International Wolf Center (IWC), a nonprofit organization. From the inception of the program to 2000, MI DA has paid 90 percent of full market value of depredated livestock at the time of loss. The IWC account was used to pay the remaining 10 percent from 2000 to 2002 when MI DA began paying 100 percent of the full market value of depredated livestock. The IWC account continues to be used to pay the difference between value at time of loss and the full fall market value for depredated young-of-the-year livestock, and together the two funds have provided nearly \$38,000 in livestock loss compensation through 2008 (Roell *et al.*, p. 15). Neither of these programs provides compensation for pets or for veterinary costs to treat wolf-inflicted livestock injuries. The MI DNR plans to continue cooperating with MI DA and other organizations to maintain the wolf depredation compensation program (MI DNR 2008a, pp. 59–60).

In 2008, Michigan passed two House Bills that would become effective after Federal delisting. Those bills authorized a livestock or dog owner (or a designated agent) to "remove, capture, or use lethal means to destroy a wolf that is in the act of preying upon" the owner's livestock or dog. During the 2 months that wolves were federally and State delisted in 2009, no wolves were killed under these authorizations. We are confident that the limited number of wolves expected to be taken under these bills would not affect the viability of the Michigan wolf population.

*Regulatory Mechanisms in Other States and Tribal Areas Within the WGL DPS*

## North Dakota and South Dakota

North Dakota lacks a State endangered species law or regulation. Any wolves in the State currently are classified as furbearers, with a closed season. North Dakota Game and Fish Department is unlikely to change the species' State classification immediately following Federal delisting. Wolves are included in the State's Wildlife Action Plan as a "Level 3" Species of Conservation Priority. Level 3 species are those "having a moderate level of conservation priority, but are believed to be peripheral or do not breed in North Dakota." Placement on this list gives species greater access to conservation funding, but does not afford any additional regulatory or legislative protection (Bicknell in litt. 2009).

Currently any wolves that may be in South Dakota are not State listed as threatened or endangered, nor is there a hunting or trapping season for them. Upon the effective date of any Federal delisting, gray wolves in eastern South Dakota will fall under general protections afforded all State wildlife. These protections require that specific provisions—seasons and regulations—be established prior to initiating any form of legal take. Thus, the State could choose to implement a hunting or trapping season for wolves east of the Missouri River; however, absent some definitive action to establish a season, wolves would remain protected. Following Federal delisting, any verified depredating wolves east of the Missouri will likely be trapped and killed by the USDA-APHIS-Wildlife Services program (Larson in litt. 2005). Non-depredating wolves in North and South Dakota not on the Federal list will continue to receive protection by the States' wildlife protection statutes unless specific action is taken to open a hunting or trapping season or otherwise remove existing protections.

*Post-delisting Depredation Control in North and South Dakota*—Since 1993, five incidents of verified wolf depredation have occurred in North Dakota, with one in September 2003 and two more in December 2005. There have been no verified wolf depredations in South Dakota in recent decades. Following Federal delisting we assume that lethal control of a small number of depredating wolves will occur in one or both of these States. Lethal control of depredating wolves may have adverse impacts on the ability of wolves to occupy any small areas of suitable or marginally suitable habitat that may

exist in the States. However, lethal control of depredating wolves in these two States will have no adverse effects on the long-term viability of wolf populations in the WGL DPS as a whole, because the existence of a wolf or a wolf population in the Dakotas will not make a meaningful contribution to the maintenance of the current viable, self-sustaining, and representative metapopulation of wolves in the WGL DPS.

## Other States in the Western Great Lakes DPS

The DPS includes the portion of Iowa that is north of Interstate Highway 80, which is approximately 60 percent of the State. The Iowa Natural Resource Commission currently lists wolves as furbearers, with a closed season (Howell in litt. 2005). Following Federal delisting of the DPS, wolves dispersing into northern Iowa will be protected by State law.

The portion of Illinois that is north of Interstate Highway 80, less than one-fifth of the State, is included in the DPS and is part of the geographic area where wolves are removed from Federal protection. Gray wolves are currently protected in Illinois as a threatened species under the Illinois Endangered Species Protection Act (520 ILCS 10). Thus, following Federal delisting, wolves dispersing into northern Illinois would continue to be protected from human take by State law.

The extreme northern portions of Indiana and northwestern Ohio are included within the DPS. Any wolves that are found in this area are no longer federally protected under the Act. The State of Ohio classifies the gray wolf as "extirpated," and there are no plans to reintroduce or recover the species in the State. The species lacks State protection, but State action is likely to apply some form of protection if wolves begin to disperse into the State (Caldwell in litt. 2005). Indiana DNR lists the gray wolf as extirpated in the State, and the species would receive no State protection under this classification following any Federal delisting. The only means to provide State protection would be to list them as State-endangered, but that is not likely to occur unless wolves become resident in Indiana (Johnson in litt. 2005, in litt. 2006). Thus, federally delisted wolves that might disperse into Indiana and Ohio would lack State protection there, unless these two States take specific action to provide new protections.

Because the portions of Iowa, Illinois, Indiana, and Ohio within the WGL DPS do not contain suitable habitat or currently established packs, depredation

control in these States would not have any significant impact on the continued viability of wolf populations in the WGL DPS.

## Tribal Management and Protection of Wolves

Native American tribes and inter-tribal resource management organizations have indicated to the Service that they will continue to conserve wolves on most, and probably all, Native American reservations in the core recovery areas of the WGL DPS. The wolf retains great cultural significance and traditional value to many Tribes and their members (additional discussion is found in Factor E), and to retain and strengthen cultural connections, many tribes oppose unnecessary killing of wolves on reservations and on ceded lands, even following any Federal delisting (Hunt in litt. 1998; Schrage in litt. 1998a; Schlender in litt. 1998). Some Native Americans view wolves as competitors for deer and moose, whereas others are interested in harvesting wolves as furbearers (Schrage in litt. 1998a). Many tribes intend to sustainably manage their natural resources, wolves among them, to ensure that they are available to their descendants. Traditional natural resource harvest practices, however, often include only a minimum amount of regulation by the Tribal governments (Hunt in litt. 1998).

Although not all Tribes with wolves that visit or reside on their reservations have completed management plans specific to the wolf, several Tribes have informed us that they have no plans or intentions to allow commercial or recreational hunting or trapping of the species on their lands after Federal delisting. The Red Lake Band of Chippewa Indians (Minnesota) and the Little Traverse Bay Band of Odawa Indians (Michigan) have developed wolf monitoring and/or management plans. The Service has also awarded a grant to the Ho-Chunk Nation to identify wolf habitat on reservation lands.

As a result of many past contacts with, and previous written comments from, the Midwestern Tribes and their inter-tribal natural resource management agencies—the Great Lakes Indian Fish and Wildlife Commission (GLIFWC), the 1854 Authority, and the Chippewa Ottawa Treaty Authority—it is clear that their predominant sentiment is strong support for the continued protection of wolves at a level that ensures that viable wolf populations remain on reservations and throughout the treaty-ceded lands surrounding the reservations. While several Tribes stated that their members

may be interested in killing small numbers of wolves for spiritual or other purposes, this would be carried out in a manner that would not impact reservation or ceded territory wolf populations.

The Red Lake Band of Chippewa Indians (Minnesota) completed a wolf management plan in 2010 (Red Lake Band of Chippewa Indians 2010). A primary goal of the management plan is to maintain wolf numbers at a level that will ensure the long-term survival of wolves on Red Lake lands. Key components of the plan are habitat management, public education, and law enforcement. To address human-wolf interactions, the plan outlines how wolves may be taken on Red Lake lands. Wolves thought to be a threat to public safety may be harassed at any time, and if they must be killed, the incident must be reported to tribal law enforcement. Agricultural livestock are not common on Red Lake lands, and wolf-related depredation on livestock or pets is unlikely to be a significant management issue. If such events do occur, tribal members may protect their livestock or pets by lethal means, but “\* \* \* all reasonable efforts should be made to deter wolves using non-lethal means” (Red Lake Band of Chippewa Indians 2010, p. 15). Hunting or trapping of wolves on tribal lands will be prohibited. The Reservation currently has 7 or 8 packs with an estimated 40–48 wolves within its boundaries (Red Lake Band of Chippewa Indians 2010, p. 12).

In 2009, the Little Traverse Bay Bands of Odawa Indians (LTBB) finalized a management plan for the 1855 Reservation and portions of the 1836 ceded territory in the northern LP of Michigan (Little Traverse Bay Bands of Odawa Indians Natural Resource Department 2009). The plan provides the framework for managing wolves on the LTBB Reservation with the goal of maintaining a viable wolf presence on the LTBB Reservation or within the northern LP should a population become established by (1) prescribing scientifically sound biological wolf management, research, and monitoring strategies; (2) addressing wolf-related conflicts; (3) facilitating wolf-related benefits; and (4) developing and implementing wolf-related education and public information.

The Tribal Council of the Leech Lake Band of Minnesota Ojibwe (Council) approved a resolution that describes the sport and recreational harvest of wolves as an inappropriate use of the animal. That resolution supports limited harvest of wolves to be used for traditional or spiritual uses by enrolled Tribal

members if the harvest is done in a respectful manner and would not negatively affect the wolf population. Over the last several years, the Council has been working to revise the Reservation Conservation Code to allow Tribal members to harvest some wolves after Federal delisting (Googgeye, Jr. in litt. 2004; Johnson 2011, pers. comm.). Until this revision occurs, it is unknown whether harvest will be allowed and how a harvest might be implemented. The Tribe is currently developing a wolf management plan (Mortensen 2011, pers. comm.) In 2005, the Leech Lake Reservation was home to an estimated 75 wolves, the largest population of wolves on a Native American reservation in the 48 conterminous States (Mortensen 2006, pers. comm.; White in litt. 2003). Although no recent surveys have been conducted, the number of wolves on the reservation likely remains about the same (Mortensen 2009, pers. comm.; Johnson 2011, pers. comm.).

The Fond du Lac Band (Minnesota) believes that the “well being of the wolf is intimately connected to the well being of the Chippewa People” (Schrage in litt. 2003). In 1998, the Band passed a resolution opposing Federal delisting and any other measure that would permit trapping, hunting, or poisoning of the wolf (Schrage in litt. 1998b; in litt. 2003; 2009, pers. comm.). If this prohibition is rescinded, the Band’s Resource Management Division will coordinate with State and Federal agencies to ensure that any wolf hunting or trapping would be “conducted in a biologically sustainable manner” (Schrage in litt. 2003).

The Red Cliff Band (Wisconsin) has strongly opposed State and Federal delisting of the gray wolf. Current Tribal law protects wolves from harvest, although harvest for ceremonial purposes would likely be permitted after Federal delisting (Symbal in litt. 2003).

The Menominee Indian Tribe of Wisconsin is committed to establishing a self-sustaining wolf population, continuing restoration efforts, ensuring the long-term survival of the wolf in Menominee, placing emphasis on the cultural significance of the wolf as a clan member, and resolving conflicts between wolves and humans. They are currently working on developing a Menominee Wolf Management Plan (Cox 2011, pers. comm.).

The Tribe has shown a great deal of interest in wolf recovery and protection. In 2002, the Tribe offered their Reservation lands as a site for translocating seven depredating wolves that had been trapped by WI DNR and

Wildlife Services. Tribal natural resources staff participated in the soft release of the wolves on the Reservation and helped with the subsequent radio-tracking of the wolves. Although by early 2005 the last of these wolves died on the reservation, the tribal conservation department continued to monitor another pair that had moved onto the Reservation, as well as other wolves near the reservation (Wydeven in litt. 2006a). When that pair produced pups in 2006, but the adult female was killed, Reservation biologists and staff worked diligently with the WI DNR and the Wildlife Science Center (Forest Lake, Minnesota) to raise the pups in captivity in the hope that they could later be released to the care of the adult male. However, the adult male died prior to pup release, and they were moved back to the Wildlife Science Center (Pioneer Press 2006).

The Menominee Tribe continues to support wolf conservation and monitoring activity in Wisconsin. In recent years the Menominee Tribe has assisted the WI DNR in radio-telemetry wolf flights, allowing more regular flights to occur across all of northern Wisconsin.

The Keweenaw Bay Indian Community (Michigan) will continue to list the wolf as a protected animal under the Tribal Code following any Federal delisting, with hunting and trapping prohibited (Mike Donofrio 1998, pers. comm.). Furthermore, the Keweenaw Bay Community plans to develop a management plan that will address wolves (Donofrio in litt. 2003; Warner 2010, pers. comm.). At least four other Tribes (Stock-bridge Munsee Community, Lac Courte Oreilles Band of Ojibwe, the Mille Lacs Band of Ojibwe, and Grand Portage Band of Lake Superior Chippewa) have indicated that they are currently developing Tribal wolf management plans.

Several Midwestern Tribes (for example, the Bad River Band of Lake Superior Chippewa Indians and the LTBB) have expressed concern that Federal delisting will result in increased mortality of wolves on reservation lands, in the areas immediately surrounding the reservations, and in lands ceded by treaty to the Federal Government by the Tribes (Kiogama and Chingwa in litt. 2000). In 2006, a cooperative effort among tribal natural resource departments of several tribes in Wisconsin, WI DNR, the Service, and USDA Wildlife Services led to a wolf management agreement for lands adjacent to several reservations in Wisconsin. The goal is to reduce the threats to reservation wolf packs when they are temporarily off the reservation.

Other Tribes have expressed interest in such an agreement. This agreement, and additional agreements if they are implemented, provides supplementary protection to certain wolf packs in the western Great Lakes area.

The GLIFWC has stated its intent to work closely with the States to cooperatively manage wolves in the ceded territories in the core areas, and will not develop a separate wolf management plan (Schlender in litt. 1998). Furthermore, the Voigt Intertribal Task Force of GLIFWC has expressed its support for strong protections for the wolf, stating “[delisting] hinges on whether wolves are sufficiently restored and will be sufficiently protected to ensure a healthy and abundant future for our brother and ourselves” (Schlender in litt. 2004).

According to the 1854 Authority, “attitudes toward wolf management in the 1854 Ceded Territory run the gamut from a desire to see total protection to unlimited harvest opportunity.” However, the 1854 Authority would not “implement a harvest system that would have any long-term negative impacts to wolf populations” (Edwards in litt. 2003). In comments submitted for our 2004 delisting proposal for a larger Eastern DPS of the gray wolf, the 1854 Authority stated that the Authority is “confident that under the control of State and tribal management, wolves will continue to exist at a self-sustaining level in the 1854 Ceded Territory. Sustainable populations of wolves, their prey and other resources within the 1854 Ceded Territory are goals to which the 1854 Authority remains committed. As such, we intend to work with the State of Minnesota and other tribes to ensure successful state and tribal management of healthy wolf populations in the 1854 Ceded Territory” (Myers in litt. 2004). The 1854 Authority is currently developing a wolf management plan for the 1854 Ceded Territory, based on the above principles (Edwards 2011, pers. comm.).

While there are few written Tribal protections currently in place for wolves, the highly protective and reverential attitudes that have been expressed by Tribal authorities and members have assured us that any post-delisting harvest of reservation wolves would be very limited and would not adversely impact the delisted wolf populations. Furthermore, any off-reservation harvest of wolves by tribal members in the ceded territories would be limited to a portion of the harvestable surplus at some future time. Such a harvestable surplus would be determined and monitored jointly by State and tribal biologists, and would be

conducted in coordination with the Service and the Bureau of Indian Affairs (BIA), as is being successfully done for the ceded territory harvest of inland and Great Lakes fish, deer, bear, moose, and furbearers in Minnesota, Wisconsin, and Michigan. Therefore, we conclude that any future Native American take of delisted wolves will not significantly impact the viability of the wolf population, either locally or across the WGL DPS.

The Service and the Department of the Interior recognize the unique status of the federally recognized tribes, their right to self-governance, and their inherent sovereign powers over their members and territory. Therefore, the Department, the Service, the Bureau of Indian Affairs, and other Federal agencies, as appropriate, will take the needed steps to ensure that tribal authority and sovereignty within reservation boundaries are respected as the States implement their wolf management plans and revise those plans in the future. Furthermore, there may be tribal activities or interests associated with wolves encompassed within the tribes’ retained rights to hunt, fish, and gather in treaty-ceded territories. The Department is available to assist in the exercise of any such rights. If biological assistance is needed, the Service may provide it via our field offices. Upon delisting, the Service will remain involved in the post-delisting monitoring of the wolves in the WGL, but all Service management and protection authority under the Act will end. Legal assistance will be provided to the tribes by the Department of the Interior, and the BIA will be involved, when needed. We strongly encourage the States and Tribes to work cooperatively toward post-delisting wolf management.

Consistent with our responsibilities to tribes and our goal to have the most comprehensive data available for our post-delisting monitoring, we will annually contact tribes and their designated intertribal natural resource agencies within the DPS during the 5-year post-delisting monitoring period to obtain any information they wish to share regarding wolf populations, the health of those populations, or changes in their management and protection. Reservations within the WGL DPS that may have significant wolf data to provide during the post-delisting period include Bois Forte, Bad River, Fond du Lac, Grand Portage, Keweenaw Bay Indian Community, Lac Courte Oreilles, Lac du Flambeau, Leech Lake, Menominee, Oneida, Red Lake, Stockbridge-Munsee Community, and White Earth. Throughout the 5-year

post-delisting monitoring period, the Service will annually contact the natural resource agencies of each of these reservations and that of the 1854 Treaty Authority and Great Lakes Indian Fish and Wildlife Commission. We encourage the States and Tribes within the WGL DPS to work together on management and monitoring issues post-delisting.

#### Federal Lands

The five national forests with resident wolves (Superior, Chippewa, Chequamegon-Nicolet, Hiawatha, and Ottawa National Forests) in Minnesota, Wisconsin, and Michigan are all operating in conformance with standards and guidelines in their management plans that follow the 1992 Recovery Plan for the Eastern Timber Wolf’s recommendations for the eastern timber wolf (USDA FS 2004a, chapter 2, p. 31; USDA FS 2004b, chapter 2, p. 28; USDA FS 2004c, chapter 2, p. 19; USDA FS 2006a, chapter 2, p. 17; USDA FS 2006b, chapter 2, pp. 28–29). Delisting is not expected to lead to an immediate change in these standards and guidelines; in fact, the Regional Forester for U.S. Forest Service Region 9 is expected to maintain the classification of the wolf as a Regional Forester Sensitive Species for at least 5 years after Federal delisting (Moore in litt. 2003; Eklund 2011, pers. comm.). Under these standards and guidelines, a relatively high prey base will be maintained, and road densities will be limited to current levels or decreased. For example, on the Chequamegon-Nicolet National Forest in Wisconsin, the standards and guidelines specifically include the protection of den sites and key rendezvous sites, and management of road densities in existing and potential wolf habitat (USDA 2004c, Chap. 2, p. 19).

The trapping of depredating wolves will likely be allowed on national forest lands under the guidelines and conditions specified in the respective State wolf management plans. However, there are relatively few livestock raised within the boundaries of national forests in the upper Midwest, so wolf depredation and lethal control of wolves is neither likely to be a frequent occurrence, nor constitute a significant mortality factor, for the wolves in the WGL DPS. Similarly, in keeping with the practice for other State-managed game species, any public hunting or trapping season for wolves that might be opened in the future by the States will likely include hunting and trapping within the national forests (Lindquist in litt. 2005; Williamson in litt. 2005; Piehler in litt. 2005; Evans in litt. 2005).

The continuation of current national forest management practices will be important in ensuring the long-term viability of wolf populations in Minnesota, Wisconsin, and Michigan.

Wolves regularly use four units of the National Park System in the WGL DPS and may occasionally use three or four other units. Although the National Park Service (NPS) has participated in the development of some of the State wolf management plans in this area, NPS is not bound by States' plans. Instead, the NPS Organic Act and the NPS Management Policy on Wildlife generally require the agency to conserve natural and cultural resources and the wildlife present within the parks. National Park Service management policies require that native species be protected against harvest, removal, destruction, harassment, or harm through human action, although certain parks may allow some harvest in accordance with State management plans. Management emphasis in National Parks after delisting will continue to minimize the human impacts on wolf populations. Thus, because of their responsibility to preserve all native wildlife, units of the National Park System are often the most protective of wildlife. In the case of the wolf, the NPS Organic Act and NPS policies will continue to provide protection following Federal delisting.

Management and protection of wolves in Voyageurs National Park, along Minnesota's northern border is not likely to change after delisting. The park's management policies require that "native animals will be protected against harvest, removal, destruction, harassment, or harm through human action." No population targets for wolves will be established for the National Park (Holbeck in litt. 2005). To reduce human disturbance, temporary closures around wolf denning and rendezvous sites will be enacted whenever they are discovered in the park. Sport hunting is already prohibited on park lands, regardless of what may be allowed beyond park boundaries (West in litt. 2004). A radio-telemetry study conducted between 1987 and 1991 of wolves living in and adjacent to the park found that all mortality inside the park was due to natural causes (for example, killing by other wolves or starvation), whereas the majority (60–80 percent) of mortality outside the park was human-induced (for example, shooting and trapping) (Gogan *et al.* 2004, p. 22). If there is a need to control depredating wolves outside the park, which seems unlikely due to the current absence of agricultural activities adjacent to the

park, the park will work with the State to conduct control activities where necessary (West in litt. 2004).

The wolf population in Isle Royale National Park is described above (see Michigan Recovery). The NPS has indicated that it will continue to closely monitor and study these wolves. This wolf population is very small and isolated from the other wolf populations in the WGL DPS; as described above, it is not considered to be significant to the recovery or long-term viability of the wolf (USFWS 1992, p. 28).

Two other units of the National Park System, Pictured Rocks National Lakeshore and St. Croix National Scenic Riverway, are regularly used by wolves. Pictured Rocks National Lakeshore is a narrow strip of land along Michigan's Lake Superior shoreline. Lone wolves periodically use, but do not appear to be year-round residents of, the Lakeshore. If denning occurs after delisting, the Lakeshore would protect denning and rendezvous sites at least as strictly as the Michigan Plan recommends (Gustin in litt. 2003). Harvesting wolves on the Lakeshore may be allowed (if the Michigan DNR allows for harvest in the State), but trapping is not allowed. The St. Croix National Scenic Riverway, in Wisconsin and Minnesota, is also a mostly linear ownership. Approximately 54–58 wolves from 11 packs used the Riverway on the Wisconsin side in 2010 (Wydeven 2011, pers. comm.). The Riverway is likely to limit public access to denning and rendezvous sites and to follow other management and protective practices outlined in the respective State wolf management plans, although trapping is not allowed on NPS lands except possibly by Native Americans (Maercklein in litt. 2003).

At least one pack of 4–5 wolves used the shoreline areas of the Apostle Islands National Lake Shore, with a major deer yard area occurring on portions of the Park Service land. Wolf tracks have been detected on Sand Island, and a wolf was photographed by a trail camera on the island in September 2009. It is not known if wolves periodically swim to this and other islands, or if they only travel to islands on ice in winter.

Wolves occurring on NWRs in the WGL DPS will be monitored, and refuge habitat management will maintain the current prey base for them for a minimum of 5 years after delisting. Trapping or hunting by government trappers for depredation control will not be authorized on NWRs. Because of the relatively small size of these NWRs, however, most or all of these packs and

individual wolves also spend significant amounts of time off these NWRs.

Wolves also occupy the Fort McCoy military installation in Wisconsin. In 2003, one pack containing five adult wolves occupied a territory that included the majority of the installation; in 2004 and 2006, the installation had one pack with two adults; in 2005 there was a single pack with four wolves. In 2008–09, there were seven wolves using the installation (Wilder 2009, pers. comm.). In 2010 a pack of three wolves occurred in the northern portions of the Fort, and a pack of two occurred on the south side (Wydeven *et al.* 2010, p.42). Management and protection of wolves on the installation would not change significantly after Federal or State delisting. Den and rendezvous sites would continue to be protected, hunting seasons for other species (coyote) would be closed during the gun-deer season, and current surveys would continue, if resources are available. Fort McCoy has no plans to allow a public harvest of wolves on the installation (Nobles in litt. 2004; Wydeven *et al.* 2005a, p. 25; 2006a, p. 25).

Minnesota National Guard's (MNG) Camp Ripley contains parts of two pack territories, which typically include 10 to 20 wolves. MNG wildlife managers try to have at least one wolf in each pack radio-collared and to fit an additional one or two wolves in each pack with satellite transmitters that may record long-distance movements. There have been no significant conflicts with military training or with the permit-only public deer-hunting program at the camp, and no new conflicts are expected following delisting. Long-term and intensive monitoring has detected only two wolf mortalities within the camp boundaries—both were of natural causes (Dirks 2009, pers. comm.).

The protection afforded to resident and transient wolves, their den and rendezvous sites, and their prey by five national forests, four National Parks, two military facilities, and numerous National Wildlife Refuges in Minnesota, Wisconsin, and Michigan will further ensure the conservation of wolves in the three States after delisting. In addition, wolves that disperse to other units of the National Refuge System or the National Park System within the WGL DPS will also receive the protection afforded by these Federal agencies.

#### Summary of Factor D

In summary, upon delisting, there will be varying State and Tribal classifications and protections provided to wolves. The wolf management plans currently in place for Minnesota, Wisconsin, and Michigan will be more

than sufficient to retain viable wolf populations in each State. These State plans provide a very high level of assurance that wolf populations in these three States will not decline to nonviable levels in the foreseeable future. Furthermore, the 2006 Update to the Wisconsin Wolf Management Plan (WI DNR 2006a, p. 3–4) demonstrates the State's commitment by retaining the previous management goal of 350 wolves, and it did not weaken any significant component of the original 1999 Plan. Similarly, the 2008 revised Michigan wolf plan continues to maintain the State's commitments to maintain viable wolf populations after Federal delisting. While these State plans recognize there may be a need to control or even reduce wolf populations at some future time, none of the plans include a public harvest of wolves, and all would maintain sufficient numbers of wolves to ensure their continued survival.

When federally delisted, wolves in Minnesota, Wisconsin, and Michigan will continue to receive protection from general human persecution by State laws and regulations. Michigan met the criteria established in their management plan for State delisting and in April 2009 removed gray wolves from the State's threatened and endangered species list and amended the Wildlife Conservation Order to grant "protected animal" status to the gray wolf in the State (Roell 2009, pers. comm.). That status "prohibit[s] take, establish[es] penalties and restitution for violations of the Order, and detail[s] conditions under which lethal depredation control measures could be implemented" (Humphries in litt. 2004).

Since 2004 wolves have been listed as a "protected wild animal" by the WI DNR, allowing no lethal take unless special authorization is requested from the WI DNR (Wydeven *et al.* 2009c). Following Federal delisting, Wisconsin will fully implement that "protected wild animal" status for the species, including protections that provide for fines of \$1,000 to \$2,000 for unlawful hunting.

Minnesota DNR will consider population management measures, including public hunting and trapping, but this will not occur sooner than 5 years after Federal delisting, and MN DNR will maintain a wolf population of at least 1,600 animals (MN DNR 2001, p. 2). In the meantime, wolves may be taken legally in Zone A only when they pose an immediate threat to pets, domestic animals, or livestock or to protect human safety (MN DNR 2001, pp. 3–4). Since the wolf management plan was completed in 2001, MN DNR

has fully staffed its conservation officer corps in the State's wolf range (Stark 2009a, pers. comm.).

Except for the very small portions of Indiana and Ohio, if delisted, wolves in the WGL DPS are likely to remain protected by various State designations for the immediate future. States within the boundaries of the DPS either currently have mechanisms in place to kill depredating wolves (North Dakota and South Dakota) or can be expected to develop mechanisms following Federal delisting of the DPS, in order to deal with wolf-livestock conflicts in areas where wolf protection would no longer be required by the Act. Because these States (Illinois, Indiana, Iowa, Ohio, North Dakota, and South Dakota) constitute only about one-third of the land area within the DPS, and contain virtually no suitable habitat of sufficient size to host viable wolf populations, it is clear that even complete protection for wolves in these areas would neither provide significant benefits to wolf recovery in the DPS, nor to the long-term viability of the recovered populations that currently reside in the DPS. Therefore, although current and potential future regulatory mechanisms may allow the killing of wolves in these six States, these threats, and the area in which they will be, will not impact the recovered wolf populations in the DPS now or in the foreseeable future.

Finally, based on our review of the completed Tribal management plans and communications with Tribes and Tribal organizations, federally delisted wolves are very likely to be adequately protected on Tribal lands. Furthermore, the numerical recovery criteria (and for Minnesota, the numerical planning goal) in the Recovery Plan will be achieved and maintained (based on the population and range of off-reservation wolves) even without Tribal protection of wolves on reservation lands. In addition, on the basis of information received from other Federal land management agencies in Minnesota, Wisconsin, and Michigan, we expect National Forests, units of the National Park System, military bases, and National Wildlife Refuges will provide protections to wolves in the areas they manage that will match, and in some cases will exceed, the protections provided by State wolf management plans and State protective regulations.

We conclude that the regulatory mechanisms that will be in place subsequent to Federal delisting are adequate to control threats to wolves in the WGL DPS.

## **E. Other Natural or Manmade Factors Affecting Its Continued Existence**

### *Taking of Wolves by Native Americans for Certain Purposes*

As noted elsewhere in this rule, the wolf has great significance to many Native Americans in the western Great Lakes area, especially to Wolf Clan members, and has a central role in their creation stories. The wolf, Ma'ingan, is viewed as a brother to the Anishinaabe people, and their fates are believed to be closely linked. Ma'ingan is a key element in many of their beliefs, traditions, and ceremonies, and wolf pack systems are used as a model for Anishinaabe families and communities. We are not aware of any takings of wolves in the Midwest for use in these traditions or ceremonies while the wolf has been listed as a threatened or endangered species. While wolves have been listed as threatened in Minnesota, we have instructed Wildlife Services to provide, upon request, wolf pelts and other parts from wolves killed during depredation control actions to Tribes in order to partially serve these traditional needs.

Some Tribal representatives, as well as the GLIFWC, have indicated that if wolves are delisted, there is likely to be interest in the taking of small numbers of wolves for traditional ceremonies (King in litt. 2003; White in litt. 2003). This take could occur on reservation lands where it could be closely regulated by a Tribe to ensure that it does not affect the viability of the reservation wolf population. Such takings might also occur on off-reservation treaty lands on which certain Tribes retained hunting, fishing, and gathering rights when the land was ceded to the Federal Government in the 19th Century. Native American taking of wolves from ceded lands would be limited to a specified portion of a harvestable surplus of wolves that is established in coordination with the Tribes, consistent with past Federal court rulings on treaty rights. Such taking would not occur until such time as a harvestable surplus has been documented based on biological data, and regulations and monitoring have been established by the States and Tribes to ensure a harvest can be carried out in a manner that ensures the continued viability of the wolf population in that State. Previous court rulings have ensured that Native American treaty harvest of fish or wildlife species have not risked endangering the resource.

If requested by the Tribes, multistate natural resource agencies, or the States, the Service or other appropriate Federal



agencies will work with these parties to help determine if a harvestable surplus exists, and if so, to assist in devising reasonable and appropriate methods and levels of harvest for delisted wolves for traditional cultural purposes.

We conclude that the small number of wolves that may be taken by Native Americans will not be a significant threat to wolves in the WGL DPS.

#### *Public Attitudes Toward the Wolf*

Human behavior has had a tremendous effect on wolf populations around the world. Theory and social science research have identified attitudes, and the beliefs on which they are based, as important drivers of behavior. Therefore, understanding public attitudes toward wolves is a key component of wolf management. The success of the United States wolf-reintroduction programs of the late-nineteenth and early twentieth centuries are often accepted as evidence of negative public attitudes that were based on perceptions and beliefs brought by European settlers that portrayed the wolf as an evil, menacing threat (Browne-Nunez and Taylor 2002, p. 1; Fogleman 1988; Kellert 1986; Schanning 2009, pp. 252–253) and were perpetuated by exaggerated accounts of marauding wolves preying on livestock (Schanning 2009, p. 253).

When the wolf populations were in significant decline, there was a shift in management and a parallel shift in attitudes (Kellert *et al.* 1996; Schanning 2009, pp. 253–254; Williams *et al.* 2002, p. 581). In the Great Lakes region, bounty systems were repealed (Wisconsin in 1957, Michigan in 1960, and Minnesota in 1965) and, in 1972, the first of many attitudinal studies regarding wolves was carried out in Minnesota (Johnson 1974). In the last three decades, investigations of attitudes toward wolves and wolf management have burgeoned.

#### *Minnesota*

The first empirical examination of attitudes toward wolves was conducted using a convenience sample of 1,692 attendees of the Minnesota State Fair (Johnson 1974). It was based on the premise that children's stories, which typically cast the wolf as a villainous creature, shape attitudes from an early age. Although it found children to be more negative toward the wolf, a vast majority of adults held positive beliefs and attitudes. Most respondents felt that wolves were not a danger to humans, should not be exterminated, had value for Minnesota, and are good for the deer and moose populations.

Llewellyn (1978) reported the results of a content analysis of 1,083 public comment letters received by the Service regarding the proposed reclassification of the timber wolf in Minnesota from endangered to threatened. Of the 700 letters from Minnesota residents (the other letters were from out-of-state), 23 percent favored retention of endangered status, 7 percent supported reclassification, and 70 percent were in favor of delisting and return to State management. Of note were differences between urban and rural residents, with a large majority (78 percent) of urban residents and a minority (16 percent) of rural residents in favor of continued Federal protection of wolves. Support for delisting was largely based on concern for livestock and fear of wolves.

Kellert (1985) conducted a statewide phone survey of Minnesota residents' knowledge, attitudes, and behaviors toward the wolves. The study sample comprised the general public (Minneapolis-St. Paul residents and mostly rural, northern county residents), deer hunters, trappers, and livestock producers. Most respondents held favorable attitudes toward wolves (except farmers), supported protection of wolves and their habitat as long as it did not interfere with human needs, and supported control of problem wolves. Urban residents expressed more protectionist attitudes, while rural residents' attitudes were more utilitarian in nature. There was "somewhat-limited" factual knowledge among the general public, but a higher knowledge level among trappers and, to a lesser degree, hunters and individuals with a higher income. Fear of wolves was expressed by some respondents, although most did not feel that wolves are a threat to people. Rather large percentages of farmers (12 percent) and trappers (17 percent) reported capturing or killing a wolf, and a majority of farmer, hunter, trapper, and northern county respondents reported knowing someone who captured or killed a wolf. Additionally, almost one-third of farmers, hunters, and trappers and a quarter of northern county respondents indicated that, given the opportunity, they might shoot a wolf while deer hunting.

In 1999, a second statewide phone survey of Minnesota residents was conducted, similar to the 1985 study, using a stratified random sample of northern residents, southern residents, farmers, hunters, and trappers (Kellert 1999). During this study period, Minnesota wolves were being considered for Federal delisting. Compared to the 1985 survey, this study found an overall increase in positive

perceptions of the wolf. The general public expressed more affection and ethical concern for wolves than did farmers, although there was not a significant difference between groups in level of dislike of wolves. Over 70 percent of respondents believed wolves symbolize the beauty in nature and a large portion of the sample perceived other values of wolves, including ecological, scientific, and moral. Suburban and urban residents, the college educated, and younger respondents were more likely to have positive attitudes. Farmers were more knowledgeable about the wolf and more likely to support delisting. Of note was a substantial increase in the number of northern Minnesota residents who reported either killing a wolf themselves or knowing someone who did.

Chavez *et al.* (2005) assessed attitudes of residents of northwestern Minnesota. The sample of 600 rural residents was stratified by location: inside wolf range and outside but adjacent to wolf range. The study did not find large differences between geographic groups or farmers and non-farmers, with all groups indicating slightly unfavorable attitudes toward wolves. The authors suggest this could be attributable to shared rural cultural values and utilitarian attitudes. They also consider the possible influence of immigrant roots in Europe where folklore and early conflicts with wolves fostered negative attitudes. Both geographic groups agreed that wolves cause unacceptable levels of damage to northwestern Minnesota's livestock industry, although predators were perceived as less of an agricultural threat than other threats (*e.g.*, livestock diseases, crop pests).

Using a random sample of 909 respondents (18 percent response rate), Schanning (2005) reported "pragmatic/utilitarian" beliefs regarding wolves among Minnesota residents. Most respondents supported compensation to livestock owners and having problem wolves shot by the DNR. Counter to Kellert's earlier findings, there was a significant level of fear of wolves among Schanning's sample, including fear for personal safety (31 percent), the safety of children (64 percent), and pets (70 percent).

#### *Michigan*

In Michigan, Hook and Robinson (1982, pp. 388–391) found that only a small percentage of respondents scored high on their anti-predator scale and most respondents were in favor of wolf restoration. Hunters were more positive toward predators than nonhunters. Fear of the wolf was the most important factor related to an anti-predator

attitude, followed by negativistic attitudes toward all animals, and age, with older people holding more negative attitudes.

Kellert (1990) conducted a statewide mail survey of Michigan residents' knowledge, attitudes, and behaviors toward wolves. There were 639 respondents from the Upper (UP) and Lower (LP) peninsulas and members of three special interest groups: hunters, trappers, and livestock producers. Livestock producers were the most likely of the special interest groups to hold negative attitudes toward the wolf. LP residents were more likely than UP residents to express fear and dislike of wolves. A majority of respondents in each group, except livestock producers, supported restoration (64 percent of UP residents, 57 percent of LP residents, 76 percent of hunters, 66 percent of trappers, and 37 percent of livestock producers). Support was primarily motivated by the existence, ecological, and cultural values of the wolf.

A 2002 statewide survey of 557 Michigan residents' attitudes toward wolf recovery found that support for recovery by UP residents had declined since Kellert's 1990 study (Mertig 2004). At the time this study was conducted, the UP's wolf population had risen to about 250 animals (Hammill 2007), but in the LP, where wolves were not known to be present, there was increased support for wolf recovery in the UP. Other differences from Kellert's (1990) findings included increased support for wolf control and for hunting and trapping for pelts.

Based on a sample of 1,017 Michigan residents (20 percent response rate), Schanning (2004) found that a majority of respondents in his survey agreed with pro-wolf statements including "wolves are a part of our vanishing wilderness and should be protected" (51 percent). Similar to his 2005 study of Minnesota residents and his 2003 study of Wisconsin residents (reported below), Schanning found a substantial level of fear of wolves among the Michigan sample. Respondents reported fear for their personal safety (40 percent), the safety of children (70 percent), pets (7 percent), and livestock (66 percent).

Using a stratified random sample of respondents from five regions in Michigan, Beyer (2006) measured tolerance of wolves using a scale for social carrying capacity. The scale was based on Michigan wolves' perceived range, numbers, and the type and number of interactions with people. The study found that most people were at the most tolerant end of the scale, with smaller percentages classified as

intolerant (7 percent) or least tolerant (20 percent).

#### Wisconsin

Knight (1985, reported in Schanning 2009, p. 257) surveyed hunter attitudes in two Wisconsin counties in wolf range where a minority (20 percent) of hunters reported negative attitudes toward wolves and most (69 percent) believed that wolves should not be eliminated.

In 1988, when there were only 20 wolves in Wisconsin, Nelson and Franson (1988) compared farmer' and non-farmers' attitudes toward wolves and wolf recovery in six Wisconsin counties. A series of agree-disagree belief statements were used to gauge attitudes toward wolves. Non-farmers were more positive than farmers, and a majority agreed that the wolf "symbolizes the beauty and wonder in nature" and "it would be wonderful to hear the wolf howl in the wild" (64 percent and 62 percent respectively). Almost half of farmers agreed with the same statements. Both groups disagreed that they would be afraid of an attack if they saw a wolf while walking in the woods. Farmers and non-farmers were divided about wolf restoration, with half of farmers and about one-third of non-farmers opposed. Both groups favored trapping and removal of problem wolves.

Wilson (1999) examined knowledge, attitudes, and behaviors toward wolves in a 1997 survey of two random samples: All Wisconsin license plate owners and those who purchased an Endangered Resources (ER) license plate. Fifty percent of all license plate owners and almost 90 percent of ER license plate owners supported efforts to increase the State wolf population. There were slight differences between hunters (47 percent) and non-hunters (54 percent) who support wolf recovery.

Naughton-Treves *et al.* (2003) assessed tolerance of wolves among 535 rural Wisconsin residents using a mail-back questionnaire (82 percent response rate). They examined the influence of compensation for livestock losses to wolves and preferences for wolf management actions among different segments of the sample, including livestock producers, bear hunters, general residents, wolf damage complainants, recipients of compensation, and demographic segments. The strongest predictor of tolerance was social group. A large majority of bear hunters (73 percent) were in favor of reducing or eliminating the wolf population, compared to 45 percent of the livestock producers and 29 percent of general residents. Individuals who had lost a domestic

animal to a predator were less tolerant of wolves than those who had not. Preferences for management actions depended on the conflict situation. Approval for lethal control was highest for depredation on livestock and pets. Bear hunters also were highly in favor of lethal control when hunting hounds are killed, but other groups did not muster a majority for this option. Compensation was not associated with higher tolerance when comparing recipients to nonrecipients among those who reported losing a domestic animal to wolves.

Similar to his studies in Minnesota and Michigan, Schanning (2003) surveyed 644 Wisconsin residents' (13 percent response rate) attitudes toward wolves. He found a majority of respondents held pro-wolf attitudes based on their agreement with three belief statements: "the wolf is a symbol of the beauty and wonder in nature," "wolves are part of our vanishing wilderness and should be protected," and "wolves are essential to maintaining the balance in nature" (72 percent, 56 percent, and 62 percent in agreement, respectively). There was substantial support for wolf hunting (41 percent), and a majority (60 percent) indicated they would shoot a wolf if it threatened their pet.

In a followup to Naughton-Treves *et al.* (2003), Treves *et al.* (2009) reported attitudes of 1,364 respondents (62 percent response rate) toward compensation after wolf recovery. They compared the attitudes of individuals who contributed to Wisconsin's voluntary compensation fund with those of noncontributors and found that attitudes of each group differed in several ways. Contributors favored nonlethal over lethal problem wolf management actions and supported all types of payments more strongly with the exception of payment for hunting dogs injured or killed by wolves on public land, but a majority of respondents of both groups supported compensation "even when wolves are no longer threatened or endangered." Noncontributors were more likely to believe that wolf damages were part of raising livestock and should not be compensated.

Treves *et al.* (in review) report the first longitudinal results for change in individual attitudes over time using findings from surveys conducted in 2001 (Naughton-Treves *et al.* 2003), 2004 (Treves *et al.* 2009), and 2009. During the data collection period, wolf numbers nearly tripled and greatly exceeded the State population goal, the level of wolf depredation on pets increased and became the third most

frequent conflict after attacks on beef calves and bear-hunting dogs, and wolf management authority was granted to State governments and subsequently revoked several times after Federal court challenges. The 2009 survey found attitudes toward wolves had become less favorable, and fear of wolves, perceived competition for deer, and reported inclination to illegally kill wolves increased. In the 2009 survey, 18 percent of hunters indicated they would shoot a wolf if they saw one while hunting. Nearly half of respondents agreed their tolerance for wolves in Wisconsin would increase if people could hunt them.

Shelley *et al.* (in review) compared attitudes of Ojibwe Indians and nontribal residents of Wisconsin's wolf range. Tribal membership was the best predictor of attitudes. Ojibwe respondents had more positive attitudes toward wolves, were more supportive of wolf protection policy, and were less supportive of a public wolf harvest and lethal control of problem wolves. A considerable percentage (Ojibwe 33 percent, nontribal 44 percent) of each group indicated they would be afraid if wolves lived near their homes. Fewer Ojibwe (8 percent) than nontribal respondents (16 percent) indicated that they would shoot a wolf if they saw one while hunting. Nontribal respondents (57 percent) were more likely than Ojibwe respondents (26 percent) to believe that wolves threaten deer hunting opportunities. Shelley *et al.* (in review) point out the potential significance of treaty rights, which grant the Tribe half of any harvest, including wolves, within the territories ceded by them in nineteenth century Federal treaties upheld by Federal courts in the 1980s.

Treves and Martin (2011) examined the attitudes of 2,320 respondents, hunters and nonhunters, living within or adjacent to wolf range in surveys conducted in Wisconsin in 2001 and 2004 (reported above) and the northern Rocky Mountain (NRM) States of Idaho, Montana, and Wyoming. A majority of respondents supported regulated, public wolf hunting, although support was dependent on potential justifications for a hunting season.

In Wisconsin, bear hunters in 2001, followed by other hunters, were most likely to support an immediate hunt, whereas nonhunters in favor of wolf hunting were more likely to be supportive when managers estimate the wolf population could sustain harvests or when the majority of the public believe damages have become intolerable. There was a shift in 2004 when a majority of hunters indicated

they would support wolf hunting when the population was deemed to be at a level that could sustain harvests. More nonhunters agreed with a hunt when the public felt damages had become intolerable. Inclination to kill a wolf illegally in Wisconsin in 2001 and 2004 was high among hunters, particularly among likely carnivore-hunters. These two groups favored a significant reduction (up to half) of the Wisconsin wolf population.

In addition to the studies summarized above, citizen input on the wolf management plans of Minnesota, Wisconsin, and Michigan has provided additional insight on public support for wolf recovery. Namely, it shows strong support for wolf recovery if the adverse impacts on recreational activities and livestock production can be minimized (MI DNR 1997, pp. 13–14, 50–56; MN DNR 1998, p. 2; WI DNR 1999, pp. 51–55; WI DNR 2006c, pp. 9–11).

#### Summary of Public Attitudes

While there is a lack of empirical data on early attitudes toward wolves, historical accounts describe an antagonist view of wolves during the 19th and early 20th centuries. Attitudinal research conducted throughout the lower 48 States in the last three decades has shown that a shift toward more positive attitudes took place during the 20th century (Browne-Núñez and Taylor 2002, Kellert *et al.* 1996, Williams *et al.* 2002). Although the basis for this shift is not understood, suggested causes include changes in the portrayal of wolves in the media (Kellert *et al.* 1996) and a broader shift in societal values of wildlife (Manfredo *et al.* 2003).

Although direct comparisons cannot be made of each study summarized here, given different research methods and contextual circumstances, we can summarize some common findings and general conclusions. Similar to research conducted outside the Great Lakes region (summarized in Williams *et al.* 2002), many of the studies reviewed here demonstrate urban-rural differences in attitudes, with urban residents displaying more positive attitudes; farmers and livestock producers are more negative toward wolves; those with higher education levels have more positive attitudes; and compensation does not translate into increased tolerance.

In several studies, hunters were mostly positive toward wolves (Hook and Robinson 1982, Kellert 1990, Knight 1985), with the exception of Wisconsin bear hunters who were the most negative among special interest groups (Naughton-Treves *et al.* 2003). Cross-

sectional studies suggest increasing support for control of problem wolves and public harvest of wolves (Kellert 1985, Mertig 2004, Naughton-Treves *et al.* 2003), and one recent study shows this support has increased among individuals re-sampled over time (Treves *et al.*, in review). Some respondents indicated they had or would kill a wolf illegally (Kellert 1985; Treves *et al.*, in review).

While most respondents were positive toward wolves, it is evident that there have long been competing attitudes toward wolves. While attitudes in other regions have been shown to be relatively stable (Williams *et al.* 2002, Wilson and Bruskotter 2009), a troubling finding for managers in the Great Lakes region is the most recent research showing declining support for wolves (Hammill 2007; Mertig 2004; Treves *et al.*, in review) and an increasing inclination to kill wolves illegally (Treves *et al.*, in review). Possible explanations for this decline include increasing wolf numbers, negative interactions with humans, and negative media coverage (Hammill 2007). It is unclear how delisting will affect attitudes and behavior toward wolves. Also in question is how public wolf harvest might affect attitudes and behaviors. However, we expect that when allowed to adequately manage wolf-human conflicts, public attitudes are likely to support wolf restoration. Furthermore, the State wildlife agencies, as well as several other agencies and organizations, have professional education, information, and outreach components and will continue to present balanced science-based information to the public that will continue to foster general public support for wolf restoration and the necessity of conflict resolution to maintain public tolerance of wolves.

While we do not believe the effects of public attitudes on wolves will be a significant threat to the species, as the status and management of the wolf evolves, there will be a need for continued collaboration between managers and researchers to monitor public attitudes toward wolves and their management.

#### Hybridization With Coyotes

Genetic data relevant to possible interbreeding between North American wolves and coyotes were first reported in a study of mtDNA restriction fragment length polymorphisms by Lehman *et al.* (1991). They found mtDNA haplotypes in wolf populations in the Great Lakes region that they interpreted as being derived from coyotes (Lehman *et al.*, p. 108). As wolf

haplotypes were not found in coyotes, the apparent introgression occurred through matings of wolf males with coyote females. They determined that a minimum of six instances of coyote-wolf hybridization could account for the diversity of “coyote-type” haplotypes observed in wolves (p. 112). Their general interpretation was that introgression primarily occurred as coyotes expanded their ranges into the Great Lakes region within historical time, although they allow that two coyote-type haplotypes commonly observed in Great Lakes wolves may have been the result of ancient hybridization. Their data also indicated (Lehman *et al.*, Figure 4) that coyote-type haplotypes were less common in the western part of the Great Lakes region than in the east.

Wilson *et al.* (2000, Figure 6, p. 2165) provided a different interpretation of wolf-coyote relationships in the region. They found coyote-like mtDNA sequences in eastern Canadian wolves from Algonquin Provincial Park, Ontario, southern Manitoba, and northeastern Minnesota that were intermediate in sequence divergence between coyotes and gray wolves. As these haplotypes were apparently absent in coyotes, they were thought not to result from hybridization with coyotes, but to represent an eastern wolf species, *Canis lycaon*. They suggest that these *Canis lycaon* haplotypes may have been previously reported as “coyote-type” in the study of Lehman *et al.* (1991).

It is now generally agreed that historical and most contemporary Great Lakes wolves have unique mtDNA haplotypes that are distinct from those of other wolves, and more related to but still distinct from those of coyotes. Haplotypes specific to the early 20th century wolf population of the western Great Lakes region were identified by Leonard and Wayne (2008, pp. 2–3), from a study of 17 historical specimens from Michigan, Wisconsin, Ontario, and Quebec. Of the 17 specimens that gave conclusive results, 14 were either the same or most similar to the haplotypes described by Wilson *et al.* (2000) as *C. lycaon*. Only one had a coyote haplotype. Wheeldon and White (2009) reported haplotypes from three additional historical specimens from the western Great Lakes region. Two individuals from Minnesota (collected 1899 and 1900) had the same coyote-like haplotypes (C13) found in a late 19th century specimen from Maine, 50 years before recorded coyote sightings in Maine (Wilson *et al.* 2003), as well as in contemporary western Great Lakes wolves from Minnesota to Quebec (Leonard and Wayne 2008, pp. 2–3).

The third specimen, collected in the winter of 1907–1908 in Wisconsin, had the common Great Lakes wolf haplotype C1. Microsatellite DNA analysis of these three specimens grouped them with wolves rather than coyotes.

Kobl Müller *et al.* (2009) addressed the issue of coyote hybridization in the Great Lakes region from analyses of mtDNA sequence and both Y-chromosome and autosomal microsatellite DNA. They found evidence of repeated incidences of ancient introgression of coyotes into Great Lakes wolves, although they also suggested that introgression by coyotes is recent and ongoing, especially “north” of the Great Lakes. Although they use the term “north,” it is apparent they are referring to wolves in Ontario and Quebec, Canada east of the Great Lakes. Kobl Müller *et al.* (2009) failed to recognize that in the western Great lakes, especially Minnesota and Wisconsin, wolves were exposed to coyotes throughout historical and recent geological time (Jackson 1961, pp. 285–286; Wydeven and Pils 2008, p. 260). Their paper demonstrates that hybridization of wolves with coyotes occurred mainly east of the Great Lakes and not in the western Great lakes region.

Wheeldon and White (2009, p. 2) and Fain *et al.* (2010) concluded that the coyote-related haplotype C13 is actually an eastern wolf (what they call *C. lycaon*) marker based on its presence mainly in *C. lycaon*-*C. lupus* hybrids in the western Great Lakes region, the absence of C13 in nonhybridizing coyotes, and its occurrence in historical eastern wolves. Assessments based on mtDNA, Y-chromosome, and autosomal microsatellite DNA data consistently found that the wolf population in the western Great Lakes region does not currently interbreed with coyotes (Fain *et al.* 2010, p. 14; Wheeldon *et al.* 2010).

Lehman *et al.*'s (1991, p. 114) interpretation of coyote introgression into Great Lakes wolves included an explanation that it occurred at a time when wolf population densities were low in the region, so that wolves would be less likely to find mates of the same species and mating with coyotes was more likely to take place. Conversely, Lehman *et al.* (1991) suggested that coyote introgression does not appear to occur when wolf densities are higher. If so, the increase in population size that has occurred over the last 30 years renders the western Great Lakes wolf population less vulnerable to whatever threat may have been presented by coyote introgression. The wolf population of the region has likely been exposed to this factor for centuries and

has rebounded from near extirpation, yet retains essential genetic, behavioral, and other biological features of wolves without being displaced by coyotes. This fact suggests that the threat of coyote hybridization to the recovered WGL wolf population is small.

### Conclusion of the 5-Factor Analysis

As required by the Act, we considered the five potential threat factors to assess whether the wolves in the WGL DPS are threatened or endangered throughout all or a significant portion of their range. When considering the status of the species, the first step in the analysis is to determine whether the species is in danger of extinction or likely to become endangered in the foreseeable future throughout all of its range.

The wolf population in the WGL DPS currently occupies all the suitable habitat area identified for recovery in the Midwest in the 1978 Recovery Plan and 1992 Revised Recovery Plan and most of the potentially suitable habitat in the WGL DPS. Much of the important wolf habitat in the DPS is in public ownership, and the suitable habitat in the DPS is adequately protected for the foreseeable future.

Human-caused mortality is the most significant issue to the long-term conservation status of the wolves in the WGL DPS. Therefore, managing this source of mortality remains the primary challenge to maintaining a recovered wolf population into the foreseeable future. We have concluded that Minnesota, Wisconsin, and Michigan will maintain their share and distribution of the WGL wolf population above recovery levels for the foreseeable future, and that the threats have been sufficiently reduced. All three States have wolf management laws, plans, and regulations that adequately regulate human-caused mortality. Each of the three States has committed to manage its wolf population at or above viable population levels, and this commitment is not expected to change.

Regulatory mechanisms in all three States are adequate to facilitate the maintenance of, and in no way threaten, the recovered status of the wolves in the WGL DPS. When federally delisted, wolves in Minnesota, Wisconsin, and Michigan will continue to receive protection from general human persecution by State laws and regulations. Violation of regulations will be subject to prosecution.

As long as populations are maintained at or above minimum recovery levels, wolf biology (namely the species' reproductive capacity) and the availability of large, secure blocks of suitable habitat will maintain strong

populations capable of withstanding all other foreseeable threats. In terms of habitat, the amount and distribution of suitable habitat in public ownership provides, and will continue to provide, large core areas that contain high-quality habitat of sufficient size to anchor a recovered wolf population. Our analysis of land management shows these areas will maintain their suitability into the foreseeable future, if not indefinitely.

While disease and parasites can temporarily impact population stability, as long as populations are managed above recovery levels, these factors are not likely to threaten the wolf population at any point in the foreseeable future. Natural predation is also likely to remain an insignificant factor in population dynamics into the foreseeable future. Finally, we believe that other natural or manmade factors, such as potential hybridization with coyotes and public attitudes, are unlikely to threaten the wolves in the WGL DPS in the foreseeable future in all portions of the range within the DPS.

We find that the threat of habitat destruction or degradation or a reduction in the range of the wolf; utilization by humans; disease, parasites, or predatory actions by other animals or humans; regulatory measures by State, tribal, and Federal agencies; or other threats will not individually or in combination cause wolves in the WGL DPS to become endangered within the foreseeable future throughout all of the species' range in the DPS. Ongoing effects of recovery efforts over the past decades, which resulted in a significant expansion of the occupied range of wolves in the WGL DPS, in conjunction with future State, tribal, and Federal agency wolf management across that occupied range, will be adequate to ensure the conservation of the WGL DPS. These activities will maintain an adequate prey base, preserve denning and rendezvous sites, monitor disease, restrict human take, and keep wolf populations well above the numerical recovery criteria established in the Revised Recovery Plan (USFWS 1992, pp. 25–28). Thus, the gray wolves in the WGL DPS do not merit continued listing as threatened or endangered throughout all of their range.

#### **Is the species threatened or endangered in a significant portion of its range?**

Having determined that wolves in the WGL DPS do not meet the definition of endangered or threatened throughout their entire range, we must next consider whether they are in danger of extinction or are likely to become so in a significant portion of their range. The

Act does not define the term “significant portion of its range.” Therefore, we must give meaning to this phrase based on our experience and expertise. We interpret a portion of a species' range as being significant if it is part of the current range of the species (species used here is as defined in the Act, to include species, subspecies, or DPS) and if it is important to the conservation of the species because it contributes meaningfully to the representation, resiliency, or redundancy of the species. The contribution must be at a level such that its loss would result in a decrease in the ability to conserve the species.

Applying the definition described above for determining whether a species is endangered or threatened in a significant portion of its range, we first address whether any portions of the range of wolves in the WGL DPS warranted further consideration. We evaluated the WGL DPS in the context of whether any potential remaining threats are concentrated in one or more areas, such that if there were concentrated impacts, those wolves might be threatened, and further, whether any such area might constitute a significant portion of the species' ranges.

Wolves are highly adaptable habitat generalists, and their primary biological need is an adequate natural prey base of large ungulates. The primary current and likely future threats to wolves are excessive human-caused mortality and increased mortality from diseases and parasites. Based on the biology of the gray wolf, threats to its continued existence, and conservation biology principles, the Recovery Plan specifies that two populations (or what equates to a single metapopulation) are needed to ensure long-term viability (see *Recovery Criteria*, above). The Revised Recovery Plan states the importance of a large wolf population throughout Minnesota Wolf Management Zones 1 through 4 (geographically identical to Zone A in the 2001 Minnesota Wolf Management Plan, see Figure 2 earlier in the preamble to this rule) and the need for a second viable wolf population occupying 10,000 sq mi or 5,000 sq mi elsewhere in the eastern United States (depending on its isolation from the Minnesota wolf population) (USFWS 1992, pp. 24–29).

The Recovery Plan also discusses the importance of low-road-density areas, the importance of minimizing wolf-human conflicts, and the maintenance of an adequate natural prey base in the areas hosting these two necessary wolf populations. These portions of Minnesota (Management Zones 1

through 4) and the portions of the DPS that support the second viable wolf population (Wisconsin Zones 1 and 2 and the entire UP of Michigan) provide an adequate wild prey base, suitably low levels of human-caused mortality, and sufficient representation, resiliency, and redundancy to buffer the impacts of disease and parasite-induced mortality (See the discussion under *Recovery Criteria*, above, regarding how achieving the goals of the Recovery Plan for the Eastern Timber Wolf assures a viable wolf population in terms of representation, resiliency, and redundancy.).

Post-delisting wolf protection, management, and population and health monitoring by the States, Tribes, and Federal land management agencies will ensure the continuation of viable wolf populations above the Federal recovery criteria for the foreseeable future. The State management plans provide the greatest protections for the species in Minnesota Zone A, Wisconsin Zones 1 and 2, and across the UP of Michigan, (see the discussion of the three plans in *State Wolf Management Planning*, above). Post-delisting threats to wolves in Zone B in Minnesota, Zones 3 and 4 in Wisconsin, and in the Lower Peninsula of Michigan will be more substantial and may preclude the establishment of wolf packs in most or all of these areas. The Recovery Plan specifically recommends against managing for wolves in large areas of unsuitable habitat, stating that Minnesota Zone 5 (identical to Minnesota Wolf Management Zone B, Figure 2) should be managed with a goal of zero wolves there, because “Zone 5 is not suitable for wolves. Wolves found there should be eliminated by any legal means” (USFWS 1992, p. 20). Therefore, the Recovery Plan views Zone 5, which is roughly 60 percent of the State, as not an important part of the range of the wolf. This portion of the State is predominantly agricultural land, with high road densities, and high potential for wolves to depredate on livestock. Although individual wolves and some wolf packs occupy parts of Zone 5, these wolves are using habitat islands or are existing in other situations where conditions generally are not conducive to their long-term persistence.

The northern LP of Michigan appears to have the only unoccupied potentially suitable wolf habitat in the Midwest that is of sufficient size to maintain wolf packs (Gehring and Potter 2005, p. 1239; Potvin 2003, pp. 44–45), although its small size and fragmented nature may mean that northern LP wolf population viability would be dependent upon continuing immigration from the UP.

The only part of Michigan's LP that may contain suitable habitat are those areas of fragmented habitat studied by Potvin (2003, pp. 44–45) and Gehring and Potter (2005, p. 1239). However, these areas amount to less than half of the minimal area identified by the Recovery Plan for the Eastern Timber Wolf as needed for the establishment of viable populations. These LP areas, therefore, might have difficulty maintaining wolf populations even with the help of occasional immigration of wolves from the UP (see *Suitable Habitat Within the Western Great Lakes DPS*, above, for additional discussion). While the UP wolves may be significant to any LP wolf population (occasional UP to LP movements may provide important genetic and demographic augmentation crucial to a small population founded by only a few individuals), the reverse will not be true—LP wolves would not be important to the wolf population in the UP, as that population is already large enough in size and range to be self-sustaining.

The lack of sufficient areas of suitable habitat in those parts of North Dakota, South Dakota, Iowa, Illinois, Indiana, and Ohio that are within the WGL DPS are expected to preclude the establishment of viable populations in these areas, although dispersing wolves and packs may temporarily occur in some of these areas. As a result, wolf numbers in these areas will have no impact on the continued viability of wolves in the WGL DPS, and are not necessary to maintain adequate representation, resiliency, and redundancy for wolves in the DPS.

In conclusion, Minnesota Zone A, Wisconsin Zones 1 and 2, and the UP of Michigan provide an adequate wild prey base, suitably low levels of human-caused mortality, and sufficient numbers and distribution of wolves to ensure adequate representation, resiliency, and redundancy to buffer the impacts of disease and parasite-induced mortality. Post-delisting wolf protection, management, and population and health monitoring by the States, Tribes, and Federal land management agencies will ensure the continuation of viable wolf populations in those areas above the recovery criteria established in the Recovery Plan for the foreseeable future.

In coming to this determination, we considered the quality, quantity, and distribution of the habitat relative to the biological needs of the species, the need to maintain the remaining genetic diversity, the importance of geographic distribution in coping with catastrophes such as disease, the ability of the habitat to provide adequate wild prey, and the need to otherwise meet the conservation

needs of the species. Reasonably foreseeable threats to wolves in all parts of the WGL DPS are not likely to threaten wolf population viability in the WGL DPS in the foreseeable future. Therefore, we find that wolves in the WGL DPS are not in danger of extinction and are not likely to become endangered in the foreseeable future throughout all or a significant portion of their range.

#### Determination

After a thorough review of all available information and an evaluation of the five factors specified in section 4(a)(1) of the Act, as well as consideration of the definitions of “threatened” and “endangered” contained in the Act and the reasons for delisting as specified in 50 CFR 424.11(d), we are (1) revising the 1978 listing of wolves in Minnesota as threatened by identifying it as the WGL DPS, which includes Minnesota, Wisconsin, and Michigan and portions of the adjacent States and (2) removing that WGL DPS from the List of Endangered and Threatened Wildlife (50 CFR 17.11). Wolves have recovered in the WGL DPS as a result of the reduction of threats as described in the analysis of the five categories of threats and no longer are in danger of extinction, nor are likely to become so in the foreseeable future, throughout all or a significant portion of their range.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, tribal, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. This final rule removes these Federal conservation measures for gray wolves within the WGL DPS.

#### Effects of the Rule

This final rule revises the pre-DPS policy Minnesota “species” listing and establishes it as a WGL DPS of the gray wolf (*C. lupus*), expands the boundaries of that DPS, and removes the protections of the Act for that WGL DPS by removing the gray wolf in that DPS from the List of Endangered and Threatened Wildlife.

This final rule removes the special regulations under section 4(d) of the Act

for wolves in Minnesota. These regulations currently are found at 50 CFR 17.40(d).

Critical habitat was designated for the gray wolf in 1978 (43 FR 9607, March 9, 1978). That rule (codified at 50 CFR 17.95(a)) identifies Isle Royale National Park, Michigan, and Minnesota wolf management zones 1, 2, and 3, as delineated in 50 CFR 17.40(d)(1), as critical habitat. Wolf management zones 1, 2, and 3 comprise approximately 25,500 sq km (9,845 sq mi) in northeastern and north-central Minnesota. This final rule removes the designation of critical habitat for gray wolves in Minnesota and on Isle Royale, Michigan.

#### Post-Delisting Monitoring

Section 4(g)(1) of the Act, added in the 1988 reauthorization, requires us to implement a system, in cooperation with the States, to monitor for not less than 5 years the status of all species that have recovered and been removed from the Lists of Endangered and Threatened Wildlife and Plants (50 CFR 17.11 and 17.12). The purpose of this post-delisting monitoring (PDM) is to verify that a species delisted due to recovery remains secure from risk of extinction after it no longer has the protections of the Act. To do this, PDM generally focuses on evaluating (1) demographic characteristics of the species, (2) threats to the species, and (3) implementation of legal and/or management commitments that have been identified as important in reducing threats to the species or maintaining threats at sufficiently low levels. We are to make prompt use of the emergency listing authorities under section 4(b)(7) of the Act to prevent a significant risk to the well-being of any recovered species. Section 4(g) of the Act explicitly requires cooperation with the States in development and implementation of PDM programs, but we remain responsible for compliance with section 4(g) and, therefore, must remain actively engaged in all phases of PDM. We also will seek active participation of other entities that are expected to assume responsibilities for the species' conservation, after delisting.

We developed a PDM plan for the wolves in the WGL DPS with the assistance of the Eastern Wolf Recovery Team. That document is available on our Web site (See **FOR FURTHER INFORMATION CONTACT**).

The PDM program will rely on a continuation of State monitoring activities, similar to those which have been conducted by Minnesota, Wisconsin, and Michigan DNR's in recent years, and tribal monitoring.



Minnesota, Wisconsin, and Michigan comprise the core recovery areas within the DPS, and, therefore, the numerical recovery criteria in the Recovery Plan apply only to the area encompassed by these States' boundaries. These activities will include both population and health monitoring of individual wolves. During the PDM period, the Service and the Recovery Team will conduct a review of the monitoring data and program. We will consider various relevant factors (including but not limited to mortality rates, population changes and rates of change, disease occurrence, range expansion or contraction) to determine if the population of wolves within the DPS warrants expanded monitoring, additional research, consideration for relisting as threatened or endangered, or emergency listing.

Minnesota, Wisconsin, and Michigan DNRs have monitored wolves for several decades with significant assistance from numerous partners, including the U.S. Forest Service, National Park Service, USDA-APHIS-Wildlife Services, Tribal natural resource agencies, and the Service. To maximize comparability of future PDM data with data obtained before delisting, all three State DNRs have committed to continue their previous wolf population monitoring methodology, or will make changes to that methodology only if those changes will not reduce the comparability of pre- and post-delisting data.

In addition to monitoring wolf population numbers and trends, the PDM will evaluate post-delisting threats, in particular human-caused mortality, disease, and implementation of legal and management commitments. If at any time during the monitoring period we detect a substantial downward change in the populations or an increase in threats to the degree that population viability may be threatened, we will work with the States and Tribes to evaluate and change (intensify, extend, and/or otherwise improve) the monitoring methods, if appropriate, and/or consider relisting the WGL DPS, if warranted.

This monitoring program will extend for 5 years beyond the effective delisting date of the DPS. At the end of the 5-year period, we and the Recovery Team will conduct another review and post the results on our Web site. In addition to the above considerations, the review will determine whether the PDM program should be terminated or extended.

## Required Determinations

### *Paperwork Reduction Act*

Office of Management and Budget (OMB) regulations at 5 CFR 1320 implement provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*). The OMB regulations at 5 CFR 1320.3(c) define a collection of information as the obtaining of information by or for an agency by means of identical questions posed to, or identical reporting, recordkeeping, or disclosure requirements imposed on, 10 or more persons. Furthermore, 5 CFR 1320.3(c)(4) specifies that "ten or more persons" refers to the persons to whom a collection of information is addressed by the agency within any 12-month period. For purposes of this definition, employees of the Federal Government are not included. The Service may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a currently valid OMB control number.

This final rule does not include any collections of information that require approval by OMB under the Paperwork Reduction Act. As described under the Post-delisting Monitoring above, wolf populations in the Western Great Lakes DPS will be monitored by the States of Michigan, Minnesota, and Wisconsin in accordance with their wolf State management plans. There may also be additional voluntary monitoring activities conducted by a small number of tribes in these three States. We do not anticipate a need to request data or other information from 10 or more persons during any 12-month period to satisfy monitoring information needs. If it becomes necessary to collect standardized information from 10 or more non-Federal individuals, groups, or organizations per year, we will first obtain information collection approval from OMB.

### *National Environmental Policy Act*

We have determined that an environmental assessment or an environmental impact statement, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

### *Government-to-Government Relationship With Tribes*

In accordance with the President's memorandum of April 29, 1994, Government-to-Government Relations

with Native American Tribal Governments (59 FR 22951), E.O. 13175, and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We have coordinated the rule with the affected Tribes and, furthermore, throughout several years of development of earlier related rules and this rule, we have endeavored to consult with Native American Tribes and Native American organizations in order to both (1) provide them with a complete understanding of the changes, and (2) to understand their concerns with those changes. If requested, we will conduct additional consultations with Native American Tribes and multiracial organizations subsequent to this final rule in order to facilitate the transition to State and tribal management of wolves within the WGL DPS. We fully considered all of the comments on the proposed rule that were submitted by Tribes and Tribal members during the public comment period and attempted to address those concerns, new data, and new information where appropriate.

### *Data Quality Act*

In developing this rule we did not conduct or use a study, experiment, or survey requiring peer review under the Data Quality Act (Pub. L. 106-554).

### References Cited

A complete list of all references cited in this document is available on the Internet at <http://www.regulations.gov> or upon request from the Midwest Regional Office (see **FOR FURTHER INFORMATION CONTACT**).

### Authors

The primary authors of this rule are the staff members of the Midwest Regional Office (see **FOR FURTHER INFORMATION CONTACT**), with contributions from staff from Service Regions 2, 4, and 5. Staff from the Michigan DNR, Minnesota DNR, and Wisconsin DNR provided current information regarding wolves in their States. Staff from the Nelson Institute

for Environmental Studies at the University of Wisconsin-Madison compiled the current data on public attitudes toward the wolf.

#### List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

#### Regulation Promulgation

Accordingly, we hereby amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

#### PART 17—[AMENDED]

■ 1. The authority citation for part 17 continues to read as follows:

**Authority:** 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

#### § 17.11—[Amended]

■ 2. Amend § 17.11(h) by revising the entries for “Wolf, gray” and “Wolf, gray [Northern Rocky Mountain DPS]” under “MAMMALS” in the List of Endangered and Threatened Wildlife to read as follows:

#### § 17.11 Endangered and threatened wildlife.

\* \* \* \* \*

(h) \* \* \*

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Mammals							
*	*	*	*	*	*		*
Wolf, gray .....	<i>Canis lupus</i> .....	Holarctic .....	U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, KS, KY, LA, MA, MD, ME, MO, MS, NC, NE, NH, NJ, NV, NY, OK, PA, RI, SC, TN, VA, VT and WV; those portions of AZ, NM, and TX not included in an experimental population as set forth below; and portions of IA, IN, IL, ND, OH, OR, SD, UT, and WA as follows: (1) Southern IA, (that portion south of the centerline of Highway 80); (2) Most of IN (that portion south of the centerline of Highway 80); (3) Most of IL (that portion south of the centerline of Highway 80); (4) Western ND (that portion south and west of the Missouri River upstream to Lake Sakakawea and west of the centerline of Highway 83 from Lake Sakakawea to the Canadian border); (5) Most of OH (that portion south of the centerline of Highway 80 and east of the Maumee River at Toledo); (6) Western OR (that portion of OR west of the centerline of Highway 395 and Highway 78 north of Burns Junction and that portion of OR west of the centerline of Highway 95 south of Burns Junction); (7) Western SD (that portion south and west of the Missouri River); (8) Most of Utah (that portion of UT south and west of the centerline of Highway 84 and that portion of UT south of Highway 80 from Echo to the UT/WY Stateline); and	E	1, 6, 13, 15, 35	NA	NA.

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
			(9) Western WA (that portion of WA west of the centerline of Highway 97 and Highway 17 north of Mesa and that portion of WA west of the centerline of Highway 395 south of Mesa).				
Do .....	.....do .....	.....do .....	Mexico.				
			U.S.A. (portions of AZ, NM, and TX—see § 17.84(k)).	XN	631	NA	17.84(k).
Wolf, gray [Northern Rocky Mountain DPS].	<i>Canis lupus</i> .....	U.S.A. (MT, ID, WY, eastern WA, eastern OR, and north central UT).	U.S.A. (WY—see § 17.84(i) and (n)).	XN	561, 562	NA	17.84(i). 17.84(n).
*	*	*	*	*	*	*	*

**§ 17.40—[Amended]**

■ 3. Amend § 17.40 by removing and reserving paragraph (d).

**§ 17.95—[Amended]**

■ 4. Amend § 17.95(a) by removing the critical habitat entry for “Gray Wolf (*Canis lupus*).”

Dated: December 13, 2011.

**Daniel M. Ashe,**

*Director, U.S. Fish and Wildlife Service.*

[FR Doc. 2011–32825 Filed 12–21–11; 11:15 am]

**BILLING CODE 4310–55–P**

BILL	DATE	PAGE(S)
S. 1983	July 24, 1973	S14509-15446
ACTION: General Accounting Office Reference, S14511 (3), S14543 (2)		

*Endangered species:* By unanimous vote of 92 yeas Senate passed S. 1983, providing for the conservation, protection, and propagation of endangered species, after agreeing to committee amendment in the nature of a substitute to which Senate had at first agreed to amendments, as follows:

(1) Stevens amendment to provide for the granting of exceptions for reason of undue economic hardship to any nonnative resident of an Alaska Native village;

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(2) By 60 yeas to 33 nays, Stevens amendment giving Secretary discretionary authority to take action to provide adequate protection for species where he finds that a State does not prevent the taking of a species listed by him as endangered;

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(3) Eastland amendment to except from protection under the bill insect pests which the Secretary found presented an overwhelming risk to man;

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(4) Moss amendments designed to establish definitions consistent with language of the so-called sea mammal bill;

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(5) A series of Tunney amendments of a technical and clarifying nature;

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(6) Tunney amendment to allow the Secretary to permit the taking of an endangered species for the enhancement of that species;

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(7) Tunney amendment to exempt from the provisions of the bill endangered species now lawfully held in captivity or in a controlled environment;

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(8) Cook amendment designating as wilderness certain lands in the Daniel Boone National Forest, Ky., comprising the Pioneer Weapons Hunting Area; and

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(9) Fulbright amendment vesting in the Secretary of Agriculture authority to review species of plants which are endangered and report to the Congress thereon.

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Pages 5 14509-S 14546

(D) the International Convention for the Northwest Atlantic Fisheries;

(E) the International Convention for the High Seas Fisheries of the North Pacific Ocean;

(F) the Convention on International Trade in Endangered Species of Wild Fauna and Flora; and

(G) other international agreements.

(5) encouraging the States, through Federal financial assistance and a system of incentives, to develop and maintain conservation, protection, restoration, and propagation programs which meet national and international standards is a key to meeting the Nation's international commitments and to better safeguarding, for the benefit of all citizens, the Nation's heritage in fish and wildlife.

(b) PURPOSES.—The Congress hereby declares that the purposes and policy of this Act are to—

(1) provide an effective means to conserve, protect, and restore the ecosystems upon which endangered and threatened species of fish or wildlife depend;

(2) provide a viable program for the conservation, protection, restoration, and propagation of endangered and threatened species;

(3) take all appropriate steps to implement the Nation's international commitments with respect to endangered and threatened fish or wildlife; and

(4) insure that all departments, agencies, and instrumentalities of the United States seek, within the scope of their authority and administrative jurisdiction, to protect endangered and threatened species.

#### DEFINITIONS

SEC. 3. As used in this Act—

(1) "Convention" means the Convention on International Trade in Endangered Species of Wild Fauna and Flora, signed on March 3, 1973, and the appendices thereto.

(2) "Endangered species" means any species of fish or wildlife which is in danger of extinction throughout all or a significant portion of its range.

(3) "Fish or wildlife" means any living member of the animal kingdom and the remains of any dead member of the animal kingdom, including, but not limited to, any mammal, fish, bird, amphibian, reptile, mollusk, crustacean, arthropod or other invertebrate or any part, egg, or offspring of any such member, or any product produced from any part or parts of the remains of any such member.

(4) "Foreign commerce" includes any transaction—

(A) between persons within one foreign country;

(B) between persons in two or more foreign countries;

(C) between a person within the United States and a person in a foreign country; or

(D) between persons within the United States, where the fish or wildlife involved are moving in any country or countries outside the United States.

(5) "Import" means to land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, any place subject to the jurisdiction of the United States, whether or not such landing, bringing, or introduction constitutes an importation within the meaning of the customs laws of the United States.

(6) "Person" means an individual, corporation, partnership, trust, association, or any other private entity, or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State or political subdivision thereof, or of any foreign government.

(7) "Plant" means any member of the plant kingdom, including seeds, roots, or other parts of any such member.

(8) "Secretary" means, except as otherwise provided, the Secretary of the Interior or the Secretary of Commerce in the same

manner in which program responsibilities are vested under Reorganization Plan Numbered 4 of 1970. With respect to enforcement of the provisions of this Act and of the Convention, which pertain to the importation of terrestrial plants, the term means the Secretary of Agriculture.

(9) "Species" includes any subspecies or other group of fish or wildlife of the same species or lesser taxa in common spatial arrangement that interbreed when mature.

(10) "State" means any State, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and the Trust Territory of the Pacific Islands.

(11) "State agency" means the State agency, department, board, commission, or other governmental entity which is responsible for the management and conservation of fish and wildlife resources within a State.

(12) "Take" means to harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

(13) "Threatened species" means any species of fish or wildlife which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

(14) "United States", when used in a geographical sense, includes all States.

#### DETERMINATION OF ENDANGERED OR THREATENED SPECIES

SEC. 4. (a) GENERAL.—The Secretary shall by regulation determine whether any fish or wildlife is an endangered or threatened species as a result of any of the following factors:

(1) the present or threatened destruction, modification, or curtailment of its habitat or range;

(2) overutilization for commercial, sporting, scientific, or educational purposes;

(3) disease or predation;

(4) the inadequacy of existing regulatory mechanisms; or

(5) other natural or manmade factors affecting its continued existence.

(b) BASIS FOR DETERMINATIONS.—(1) The determinations required by this section shall be made on the basis of the best scientific and commercial data available to the Secretary, including any recommendations that have been made by the Advisory Committee established under subsection (d) of this section and after consultation, as appropriate, with all interested persons and organizations, including affected or knowledgeable Federal, State, and foreign government agencies. In any case in which such determinations involve an indigenous species, the Secretary shall consult with and consider the recommendations of each State involved. In any case in which determinations involve a species which is normally found on the high seas, in lakes, or other waters off the coast of a State of which are customarily harvested by citizens of such a State, the Secretary shall consult with and consider the recommendations of each State involved. In any case in which such determinations involve a species which is normally found in a foreign country or countries or which is harvested from the ocean by citizens of such country or countries, the Secretary shall (where practicable) with the assistance of the Secretary of State, consult with and consider the recommendations of such country or countries.

(2) In determining whether or not any fish or wildlife is an endangered or a threatened species, the Secretary shall take into consideration those efforts, if any, being made by any nation or any political subdivision of any nation to protect within any area under its jurisdiction such fish or wildlife, whether by predator control, protection of habitat and food supply, or other conservation or management practices.

(3) Fish or wildlife which have been des-

#### ENDANGERED SPECIES ACT OF 1973

The ACTING PRESIDENT pro tempore (Mr. NUNN). Under the previous order the Senate will proceed to the consideration of S. 1983, which will be stated by title.

The bill was stated by title as follows:

A bill (S. 1983) to provide for the conservation, protection, and propagation of species or subspecies of fish and wildlife that are threatened with extinction or likely within the foreseeable future to become threatened with extinction, and for other purposes.

The Senate proceeded to consider the bill which had been reported from the Committee on Commerce with an amendment to strike out all after the enacting clause and insert:

That this Act may be cited as the "Endangered Species Act of 1973".

#### DECLARATION OF POLICY

SEC. 2. (a) FINDINGS.—The Congress finds and declares that—

(1) various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation;

(2) other species of fish, wildlife and plants have been so depleted in numbers that they are in danger of or threatened with extinction;

(3) these species of fish, wildlife and plants are of educational, historical, recreational, and scientific value to the Nation and its people;

(4) the United States has pledged itself as a sovereign state in the international community to conserve and protect to the extent practicable the various species of fish or wildlife and plants facing extinction, pursuant to—

(A) migratory bird treaties with Canada and Mexico;

(B) the Migratory and Endangered Bird Treaty with Japan;

(C) the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere;

ignated as requiring protection from unrestricted commerce by any foreign country, or pursuant to any international agreement, shall receive special and full consideration by the Secretary to determine whether each is an endangered or a threatened species.

(c) **LISTS.**—(1) The Secretary shall publish in the Federal Register a list of all fish or wildlife determined by him by regulation to be endangered species and a list of all fish or wildlife determined by him by regulation to be threatened species. Such lists may be amended, modified, or revised periodically by regulation. Each list shall refer to each species of fish or wildlife named therein by scientific name and common name or names and shall specify the portion of its range over which it is endangered or threatened.

(2) The Secretary shall, upon the petition of an interested person under subsection 553 (e) of title 5, United States Code, conduct a review of any listed or unlisted species of fish or wildlife proposed to be removed from or added to either of the lists published pursuant to paragraph (1) of this subsection, but only if he makes and publishes a finding that such person has presented substantial evidence which in his judgment warrants such a review.

(3) Any list of species of fish or wildlife determined to be threatened with extinction, by the Secretary of the Interior pursuant to the Endangered Species Conservation Act of 1969, which is in effect the day before the date of enactment of this Act shall be republished to conform to the appropriate classifications under this Act. Pending reclassification as endangered species or threatened species and republication, any species listed pursuant to the Act of 1969 shall be deemed an endangered species within the meaning of this Act. Such reclassification and republication shall not require a public hearing or comment under section 553 of title 5, United States Code.

(d) **ADVISORY COMMITTEE.**—(1) The Secretary shall establish an Advisory Committee on Endangered and Threatened Species to consult with, advise, and make recommendations to him and to the States. The Advisory Committee shall consist of not more than eleven members including a Chairman who shall be appointed by the Secretary from lists of qualified individuals submitted by State fish and wildlife agency administrators, universities, nongovernmental organizations concerned with conservation, and scientific societies. Five of the members shall be regularly employed by State governments or political subdivisions thereof. The terms of office shall be so arranged by the Secretary that each year at least three new members shall be appointed to fill vacancies caused by the expiration of terms of office.

(2) The Advisory Committee shall periodically, but not less than one each year, make recommendations to the Secretary with respect to removal from, addition to, or reclassification within the lists maintained pursuant to subsection (a) of this section, and may, with the approval of the Secretary, perform other functions in furtherance of the purposes of this Act. A member of the Advisory Committee who is not otherwise a Government employee may, in the discretion of the Secretary, receive not more than \$150 per diem when engaged in the actual performance of his duties. Each member may receive reimbursement for travel, subsistence, and other necessary expenses incurred in the performance of his duties.

(e) **PROTECTIVE REGULATIONS.**—Whenever the Secretary lists a species of fish or wildlife as a threatened species, pursuant to subsection (a) of this section, he shall issue such regulations as he deems necessary and advisable to provide for the conservation, protection, restoration, or propagation of such species. With respect to any endangered or threatened species, the Secretary may by reg-

ulation prohibit any act prohibited with respect to an endangered species under section 10(a) of this Act.

#### LAND ACQUISITION

**SEC. 5.** The Secretary shall establish and implement a program to conserve, protect, restore, and propagate fish or wildlife which are listed as endangered or threatened species pursuant to section 4 of this Act. To carry out such programs, the Secretary—

(a) shall utilize as appropriate the land acquisition and other authorities conferred upon him under the Migratory Bird Conservation Act, the Fish and Wildlife Act of 1956, and the Fish and Wildlife Coordination Act;

(b) may acquire by purchase, donation, or otherwise any lands, waters, or interests therein necessary for the purpose of conserving, protecting, restoring, or propagating any endangered or threatened species. Such authority shall be in addition to any other land acquisition authority vested in him; and

(c) may use funds made available under the Land and Water Conservation Fund Act of 1965 or under this Act to acquire such lands, waters, or interests therein.

#### COOPERATION WITH THE STATES

**SEC. 6. (a) GENERAL.**—In carrying out the program authorized by this Act, the Secretary shall cooperate to the maximum extent practicable with the States. In addition to all other obligations, the Secretary shall consult with the affected State before the acquisition of any lands, waters, or interests therein for the purpose of conserving, protecting, restoring, or propagating any endangered or threatened species.

(b) **MANAGEMENT AGREEMENTS.**—The Secretary may enter into an agreement or agreements with any State for the administration and management of any area established for the conservation, protection, restoration, or propagation of an endangered or a threatened species. Any revenues derived from the administration of such areas under such agreements shall be subject to section 401 of the Act of June 15, 1935 (16 U.S.C. 715s).

(c) **FINANCIAL ASSISTANCE.**—The Secretary is authorized to enter into a cooperative agreement in accordance with this subsection to provide financial assistance to any State which establishes and maintains an adequate and active program for the management, conservation, protection, and restoration of endangered and threatened species. Before the Secretary may enter into or renew such a cooperative agreement to provide financial assistance to a State, he shall make, justify, and publish in the Federal Register a finding that such agreement would further the policy of this Act and that such State has a program under which—

(1) the State agency has authority and administrative jurisdiction to manage and protect any species of fish or wildlife which is determined by such agency or the Secretary to be endangered or threatened;

(2) the State has established a State plan, including a management program under the State agency, for all species of resident fish or wildlife which are deemed by the Secretary to be endangered or threatened, and has furnished a copy of such plan and program together with all pertinent details, information, and data requested to the Secretary;

(3) the State agency during the first year of the existence of such agreement—

(A) will issue protective regulations;

(B) will employ sufficient trained and qualified personnel; and

(C) will maintain investigation, enforcement, and public education programs, which are adequate, in the Secretary's judgment, for the conservation, protection, restoration, and propagation of species of fish or wildlife facing extinction;

(4) the State agency is authorized and

plans to conduct studies to determine the status and requirements for survival of species of resident fish or wildlife and agrees to transmit a copy of the findings of such studies to the Secretary;

(5) the State agency is authorized and plans to establish programs, including the acquisition of lands, waters, or interests therein, for the conservation, protection, restoration, and propagation of endangered and threatened species; and

(6) provision is made for public participation in designating species of resident fish or wildlife as endangered or threatened.

(d) **ALLOCATION OF FUNDS.**—(1) Funds appropriated for financial assistance pursuant to subsection (c) of this section shall be available to the Secretary for allocation to the States under cooperative agreements. The purposes for which such funds may be used include, but are not limited to, research, censusing, law enforcement, and habitat acquisition or improvement. The Secretary shall allocate appropriated funds to such States upon the basis of—

(A) the international commitments of the United States to protect endangered or threatened species;

(B) the national significance of a species found to be endangered or threatened within a State; and

(C) the potential for preventing extinction of a species or for restoring a species to non-endangered or nonthreatened status.

Funds allocated to a State but unexpended or unobligated at the close of the fiscal year remain available for expenditure by such State until the close of the succeeding fiscal year.

(2) Each cooperative agreement between a State and the Secretary shall provide for—

(A) the actions to be taken by the Secretary and the State;

(B) the benefits that are expected to be derived in connection with preservation and restoration of endangered or threatened species;

(C) the estimated cost of these actions; and

(D) the share of such costs to be borne by the Federal Government and by the States, except that—

(1) the Federal share of such program costs shall not exceed 50 per centum of the estimated program costs stated in the agreement; and

(2) the Federal share may be increased to 66 $\frac{2}{3}$  per centum whenever two or more States, having a common interest in a program that the Secretary deems to meet the criteria of paragraph (1) of this subsection, enter jointly into an agreement with the Secretary.

The Secretary may, in his discretion, and under such rules and regulations as he may prescribe, advance funds to the State for financing the United States pro rata share agreed upon in the cooperative agreement.

(3) The Secretary is authorized to issue such regulations as may be appropriate to carry out the provisions of this section with respect to financial assistance to States.

(4) For the purposes of this section, there is authorized to be appropriated not to exceed \$10,000,000.

(e) **PERIODIC REVIEW.**—The finding made under subsection (c) of this section and any action taken by the Secretary under this section shall be subject to his periodic review, including the consideration of comment from interested persons, at no greater than annual intervals. Upon ninety days' notice in writing to the affected State, the Secretary may terminate in his discretion any cooperative agreement entered into under this section.

(f) **STATE ACTION PERMITTED.**—Nothing in this Act shall be construed as superseding or limiting the power of any State or political subdivision thereof to enact legislation or



regulations more restrictive than or consistent with the provisions of this Act with respect to an endangered or a threatened species: *Provided*, That any State law or regulation of the import or export of or the interstate or foreign commerce in an endangered species listed pursuant to section 4 of this Act is void to the extent that it may effectively permit what is prohibited by this Act or its implementing regulations, or prohibit what is authorized pursuant to an exemption or permit provided for in this Act or its implementing regulations. This Act shall not otherwise be construed to void any State law or regulation which is intended to conserve and manage migratory, resident, or introduced fish or wildlife, or to permit or prohibit sale of such fish or wildlife.

#### INTERAGENCY COOPERATION

SEC. 7. The Secretary shall review all programs administered by him and utilize such programs in furtherance of the policy of this Act. All other departments, agencies, and instrumentalities of the Federal Government shall, in consultation with and with the assistance of the Secretary—

(a) carry out such programs as are practicable for the protection of species listed, pursuant to section 4 of this Act, as endangered or threatened;

(b) take such action as is necessary to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of any endangered or threatened species, or result in the destruction or modification of any habitat of such species which is determined by the Secretary, after consultation to the extent appropriate and necessary with affected States, to be a critical habitat of such species.

#### INTERNATIONAL COOPERATION

SEC. 8. (a) **FINANCIAL ASSISTANCE.**—As a demonstration of the commitment of the United States to the worldwide protection of endangered and threatened species, the President may, subject to the provisions of section 1415 of the Supplemental Appropriation Act, 1953 (31 U.S.C. 724), use foreign currencies accruing to the United States Government under the Agricultural Trade Development and Assistance Act of 1954 or any other law to provide to any foreign country (with its consent) assistance in the development and management of programs in that country which the Secretary determines to be necessary or useful for the conservation, protection, restoration, or propagation of any endangered or threatened species listed by the Secretary pursuant to section 4 of this Act: *Provided*, That no funds other than foreign currencies available for expenditure only within such foreign country shall be used pursuant to this section. The President shall provide assistance (which includes, but is not limited to, the acquisition, by lease or otherwise, of lands, waters, or interests therein) to foreign countries under this section upon such terms and conditions as he deems appropriate.

(b) **ENCOURAGEMENT.**—In order to carry out further the provisions of this Act, the Secretary, with the assistance of the Secretary of State, shall encourage—

(1) foreign countries to provide for the protection, conservation, restoration, or propagation of fish or wildlife, including endangered and threatened species listed pursuant to section 4 of this Act;

(2) the entering into of bilateral or multilateral agreements for foreign countries to provide for such protection, conservation, restoration, propagation; and

(3) foreign persons, who directly or indirectly take fish or wildlife in foreign countries or on the high sea for importation into the United States for commercial or other purposes, to develop and carry out, with such assistance as he may provide, conservation practices designed to enhance such fish, wildlife and plants and their habitat.

(c) **PERSONNEL.**—After consultation with the Secretary of State, the Secretary may—

(1) assign or otherwise make available any officer or employee of his department for the purpose of cooperating with foreign countries and international organizations in developing personnel resources and programs which promote the protection, conservation, restoration, or propagation of fish or wildlife; and

(2) conduct or provide financial assistance for the educational training of foreign personnel, in this country or abroad, in fish, wildlife or plant management, research, and law enforcement, and to render professional assistance abroad in such matters.

(d) **INVESTIGATIONS.**—After consultation with the Secretary of State and the Secretary of the Treasury, as appropriate, the Secretary may conduct or cause to be conducted such law enforcement investigations and research abroad as he deems necessary to carry out the purposes of his Act.

(e) **CONVENTION IMPLEMENTATION.**—The President is authorized and directed to designate appropriate agencies to act as the Management Authority or Authorities and the Scientific Authority or Authorities pursuant to the Convention. The agencies so designated shall thereafter be authorized to do all things assigned to them under the Convention, including the issuance of permits and certificates. The agency designated by the President to communicate with other parties to the Convention and with the Secretariat shall also be empowered, in consultation with the State Department, to act on behalf of and represent the United States in all regards as required by the Convention.

#### REGULATIONS, PROCEDURE, AND JUDICIAL REVIEW

SEC. 9. (a) **REGULATIONS.**—The Secretary shall publish any regulations proposed under this Act in the Federal Register at least sixty days prior to the time when such regulations shall become final, except that in case of an emergency the Secretary may publish such regulations not less than thirty days prior to the time when such regulations shall become final if at the same time he publishes in the Federal Register detailed reasons why emergency action is necessary. The Secretary shall also publish in the Federal Register a notice of all petitions received pursuant to this Act and, if such petition is denied, his reasons therefor. Such notice shall identify the purpose of the petition and include a statement of the availability of any data submitted in support of such petition. If any person adversely affected by a proposed regulation files objections and requests a public hearing within forty-five days of the date of publication of the proposed regulation, the Secretary shall grant such request. If such public hearing is held, final regulations shall not be promulgated by the Secretary until after the conclusion of such hearing. All public hearings authorized by this subsection shall consist of the oral and written presentation of data or arguments in accordance with such conditions or limitations as the Secretary may make applicable thereto. Proposed and final regulations issued under this Act shall set forth findings of fact on which the regulations are based and shall state the relationship of such findings to the regulations issued.

(b) **PROCEDURE.**—Except as expressly modified by this section, the provisions of the Administrative Procedure Act (5 U.S.C. 551 et seq.) shall apply to proceedings conducted by the Secretary under this Act: *Provided*, That the provisions of this section shall not apply to the extent necessary to permit emergency action by the Secretary. Notice of and reasons for such action shall be published prior to such action in the Federal Register.

(c) **JUDICIAL REVIEW.**—(1) Any judicial review of final regulations promulgated under this Act and final actions under section 5(c) of this Act shall be in accordance with sec-

tions 701-706 of title 5, United States Code, except that—

(A) with respect to regulations promulgated under section 4 or 6 of this Act, the findings of the Secretary as to the facts shall be sustained if based upon substantial evidence on the record considered as a whole; and

(B) with respect to relief pending review, no stay of an action may be granted unless the reviewing court determines that the party seeking such stay—

(i) is likely to prevail on the merits in the review proceeding; and

(ii) will suffer irreparable harm pending such proceeding.

(2) If the party seeking judicial review applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court either that—

(A) the information is material and was not available at the time of the proceeding before the Secretary; or

(B) failure to include such evidence in the proceeding was an arbitrary or capricious act of the Secretary, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Secretary, and to be adduced upon the hearing, in such manner and upon such terms and conditions as the court may deem proper. The Secretary may notify his findings as to the facts, or make new findings, by reason of the additional evidence so taken, and he shall file with the court such modified or new findings and his recommendation, if any, for the modification or setting aside of his original order.

(d) **AUDIT.**—(1) Each recipient of Federal assistance under this Act, pursuant to grants, subgrants, contracts, subcontracts, loans, or other arrangements, entered into other than by formal advertising, and which are otherwise authorized by this Act, shall keep such records as the Secretary shall prescribe, including records which fully disclose the amount and disposition by such recipient of the proceeds of such assistance, the total cost of the project or undertaking in connection with which such assistance is given or used, the amount of that portion of the cost of the project or undertaking supplied by other sources, and such other records as will facilitate an effective audit.

(2) The Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, shall, until the expiration of three years after completion of the project or undertaking referred to in subsection (a) of this section, have access for the purpose of audit and examination to any books, documents, papers, and records of such recipients which in the opinion of the Secretary or the Comptroller General may be related or pertinent to the grants, subgrants, contracts, subcontracts, loans or other arrangements referred to in subsection (a).

#### UNLAWFUL CONDUCT

SEC. 10. (a) **PROHIBITED ACTS.**—Except as provided in section 11 of this Act, it is unlawful for any person subject to the jurisdiction of the United States to—

(1) import into, or export from the United States any endangered species which has been listed pursuant to section 4 of this Act;

(2) take any such species within the United States or in the territorial sea of the United States or upon the high seas;

(3) possess, sell, deliver, carry, transport, ship, or receive, by any means whatever, any such species which are taken in violation of paragraph (2) of this subsection;

(4) deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and for commercial purposes, any such species;

(5) sell, distribute, or offer for sale in foreign commerce, interstate commerce, or activity affecting interstate commerce specimens or products processed or manufactured

in whole or in part from specimens of any such species;

(6) attempt to commit, solicit another to commit, or cause to be committed, any act prohibited by paragraphs (1) through (5) of this subsection;

(7) engage in any trade in any specimens of fish, wildlife, or plants, contrary to the provisions of the Convention, or possess any specimens traded contrary to the provisions of the Convention, including the definitions in article I therein;

(8) violate any regulation which is promulgated by the Secretary pursuant to section 4(e) of this Act; or

(9) import into or export from the United States except at a port or ports designated by the Secretary, any fish, or wildlife, except nonendangered and nonthreatened shellfish and fishery products which are imported or exported for human or animal consumption or taken for recreational purposes in waters under United States jurisdiction or on the high seas. To facilitate enforcement of this paragraph and to reduce the costs of enforcement, the Secretary, with the approval of the Secretary of the Treasury and after notice and opportunity for public hearing, may, by regulations, designate ports and change such designations. Upon such terms and conditions as he may prescribe, the Secretary may permit such importation at nondesignated ports in the interest of the health or safety of the fish or wildlife or for any other reasons he deems appropriate. Any port designated by the Secretary of the Interior under the authority of section 4(d) of the Act of December 5, 1969 (16 U.S.C. 668cc-4(d)), shall, if such designation is in effect on the day before the date of the enactment of this Act, be deemed to be a port designated by the Secretary under this paragraph until such time as the Secretary otherwise provides.

(b) **SIMILARITY OF APPEARANCE CASES.**—The Secretary may, by regulation, and to the extent he deems advisable, treat any species of fish or wildlife as an endangered or threatened species even though it is not listed pursuant to section 4 of this Act if he finds that—

(A) such species so closely resembles in appearance, at the point in question, a species which has been listed pursuant to such section that enforcement personnel would have substantial difficulty in attempting to differentiate between the listed and unlisted species;

(B) the effect of this substantial difficulty is an additional threat to an endangered or threatened species; and

(C) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of this Act.

#### EXCEPTIONS

**SEC. 11. (a) GENERAL.**—Upon a finding that the excepted conduct will not adversely affect the regenerative capacity of the involved species in a significant portion of its range or habitat or otherwise affect the survival of the wild population of such species, and upon such terms and conditions as he may prescribe, the Secretary may issue permits authorizing the importation, exportation, taking, or transportation, by persons found to be qualified, of any fish or wildlife which is listed as an endangered or threatened species pursuant to section 4 of this Act. for—

(1) scientific purposes in furtherance of the purposes of this Act; or

(2) the propagation of such species in captivity or in a controlled habitat.

(b) **HARDSHIP.**—The Secretary may except from the application of section 10(a) of this Act any person who enters into a contract with respect to a species of fish or wildlife before the date of publication in the Federal Register of notice of a proposed listing of that species as an endangered or threatened

species if the failure to grant such exception will cause undue economic hardship to such person under the contract. The extent and duration of such exception shall be such as the Secretary deems appropriate. No such exception shall be granted unless such person applies to the Secretary in writing and furnishes with such application such information as the Secretary may require to prove such hardship. No such exception shall be for a duration of more than one year from the date of publication in the Federal Register of notice of a proposed listing of the involved species, nor shall such exception apply to a quantity of fish or wildlife in excess of that specified by the Secretary. The one-year period for those species of fish or wildlife which were listed by the Secretary as endangered prior to the effective date of this Act shall expire in accordance with the terms of section 3 of the Act of December 5, 1969 (83 Stat. 275). No such exemption may be granted for the importation or exportation of a specimen listed in appendix I of the Convention which is to be used for primarily commercial purposes.

(c) **PROCEDURE.**—(1) The Secretary shall publish a notice in the Federal Register of each application for an exception. Each notice shall invite the submission from interested parties, within thirty days after the date of the notice, of written data, views, or arguments with respect to the application. Information received by the Secretary as a part of any application shall be available to the public as a matter of public record at every stage of the proceeding.

(2) The Secretary may grant exceptions under subsections (a) and (b) of this section only if he finds, and publishes such finding in the Federal Register, that such exceptions were applied for in good faith and if granted and exercised will not operate to the disadvantage of such endangered or threatened species and will be consistent with the policy of this Act.

(d) **ALASKA NATIVES.**—(1) The provisions of this Act shall not apply with respect to the taking of any endangered or threatened species by any Indian, Aleut, or Eskimo who is an Alaskan native who resides in Alaska if such taking is for the purpose of consumption or use in a native community or for the purpose of selling or creating for sale in interstate commerce authentic native articles of handicrafts and clothing: *Provided*, That in each case such taking is not accomplished in a wasteful manner. As used in this paragraph—

(A) "consumption or use in a native community" includes selling any edible portion of fish or wildlife in native villages and towns in Alaska for native consumption; and

(B) "authentic native articles of handicrafts and clothing" means items composed wholly or in some significant respect of natural materials, and which are produced, decorated, or fashioned in the exercise of traditional native handicrafts without the use of pantographs, multiple carvers, or other mass copying devices. Traditional native handicrafts include, but are not limited to, weaving, carving, stitching, sewing, lacing, beading, drawing, and painting.

(2) Notwithstanding the provisions of paragraph (1) of this subsection, whenever the Secretary determines that any species of fish or wildlife which is subject to taking by Indians, Aleuts, or Eskimos is an endangered or threatened species, and that such taking materially and negatively affects the threatened and endangered species, he may prescribe regulations upon the taking of such species by any such Indian, Aleut, or Eskimo. Such regulations may be established with reference to species, geographical description of the area included, the season for taking, or any other factors related to the reason for establishing such regulations and consistent with the policy of this Act. Such regulations shall be prescribed after a notice and hear-

ings in the affected judicial districts of Alaska and as otherwise required by section 103 of the Marine Mammal Protection Act of 1972, and shall be removed as soon as the Secretary determines that the need for their imposition has disappeared: *Provided*, That no such regulation shall be established which is in contravention of any provision of the Marine Mammal Protection Act of 1972.

#### PENALTIES AND ENFORCEMENT

**SEC. 12. (a) CIVIL PENALTY.**—(1) Any person who—

(A) knowingly violates any provision of this Act or any regulation or permit issued under this Act, which prohibits the taking, importing, exporting, shipping, receiving, or otherwise moving in interstate or foreign commerce of any endangered or threatened species of fish or wildlife, or commits any act made unlawful under section 10(a) of this Act, may be assessed a civil penalty by the Secretary of not more than \$10,000 for each violation;

(B) commits any act made unlawful under section 10(a) of this Act, or violates any other provision of this Act, or any regulation or permit issued under this Act, may be assessed a civil penalty by the Secretary of not more than \$1,000 for each such violation.

No penalty shall be assessed unless such person is given notice an opportunity for a hearing with respect to such violation. Each prohibited act is a separate violation. Any such civil penalty may be compromised by the Secretary. Upon any failure to pay a penalty assessed under this subsection, the Secretary may by his own attorneys institute a civil action in a district court of the United States for any district in which such person is found, resides, or transacts business to collect the penalty and such court shall have jurisdiction to hear and decide any such action. The court shall hear such action solely on the record made before the Secretary and shall sustain his action if it is supported by substantial evidence on the record considered as a whole.

(2) Hearings held during proceedings for the assessment of civil penalties authorized by paragraph (1) of this subsection shall be conducted in accordance with section 554 of title 5, United States Code. The Secretary may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and may administer oaths. Witnesses summoned shall be paid the same fees and mileage that are paid to witnesses in the courts of the United States. In case of contumacy or refusal to obey a subpoena served upon any person pursuant to this paragraph, the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Secretary or to appear and produce documents before the Secretary, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(b) **CRIMINAL VIOLATIONS.**—(1) Any person who knowingly and willfully violates any provision of this Act, or of any regulation or permit issued thereunder, shall, upon conviction, be fined not more than \$20,000 or imprisoned for not more than one year, or both.

(2) The head of any Federal agency which has issued a lease, license, permit, or other agreement authorizing the use of Federal lands, including grazing of domestic livestock, to any person who is convicted under paragraph (1) of this subsection may immediately modify, suspend, or revoke such lease, license, permit, or other agreement. The Secretary may suspend, cancel, or refuse to issue for a period of up to one year Federal hunting or fishing permits or stamps with respect to any person who is convicted under para-

graph (1) of this subsection. The United States shall not be liable to pay any compensation, reimbursement, or damages in connection with any such modification, suspension, or revocation of any lease, license, permit, stamp, or other agreement.

(c) **REWARDS.**—Upon the recommendation of the Secretary, the Secretary of the Treasury is authorized to pay an amount equal to one-half of the civil penalty or fine paid, but not to exceed \$2,500, to any person who furnishes information which leads to a finding of civil violation or a conviction of a criminal violation of any provision of this Act or any regulation or permit issued thereunder. Any officer or employee of the United States or of any State or local government who furnishes information or renders service in the performance of his official duties shall not be eligible for payment under this section.

(d) **ENFORCEMENT.**—(1) The provisions of this Act and any regulations or permits issued under this Act shall be enforced by the Secretary, the Secretary of the Treasury, or the Secretary of the Department in which the Coast Guard is operating, or all Secretaries. Each such Secretary may utilize, by agreement, with or without reimbursement, the personnel, services, and facilities of any other Federal agency or any State agency for purposes of enforcing this Act.

(2) The judges of the district courts of the United States and the United States magistrates may, within their respective jurisdictions, upon proper oath or affirmation showing probable cause, issue such warrants or other process as may be required for enforcement of this Act and any regulation issued thereunder.

(3) Any person authorized by the Secretary, the Secretary of the Treasury, or the Secretary of the Department in which the Coast Guard is operating, in furtherance of the enforcement of this Act may execute and serve any arrest warrant, search warrant, or other warrant of civil or criminal process issued by any officer or court of competent jurisdiction. A person so authorized may search and seize, with or without a warrant, to the extent authorized by law. Any fish, wildlife, property, or item so seized shall be held by any person authorized by the Secretary, the Secretary of the Treasury, or the Secretary of the Department in which the Coast Guard is operating pending disposition of civil or criminal proceedings, or the institution of an action in rem for forfeiture of such fish, wildlife, property, or item pursuant to paragraph (4) of this subsection, except that the Secretary may, in lieu of holding such fish, wildlife, property, or item, permit the owner or consignee to post a bond or other surety satisfactory to the Secretary.

(4) All fish or wildlife, or plants taken, possessed, sold, purchased, offered for sale or purchase, transported, delivered, received, carried, shipped, exported or imported contrary to the provisions of this Act, any regulation issued under this Act, or any permit issued thereunder, and all guns, traps, nets, and other equipment, vessels, vehicles, aircraft, and other means of transportation used to aid the taking, possessing, selling, purchasing, offering for sale or purchase, transporting, delivering, receiving, carrying, shipping, exporting or importing of any fish or wildlife, or plants in violation of this Act, any regulation made pursuant thereto, or any permit issued thereunder shall be subject to forfeiture to the United States.

(5) All provisions of law relating to the seizure, forfeiture, and condemnation of a vessel for violation of the customs laws, the disposition of such vessel or the proceeds from the sale thereof, and the remission or mitigation of such forfeiture, shall apply to the seizures and forfeitures incurred, or alleged to have been incurred, under the provisions of this Act, insofar as such provisions of law are applicable and not inconsistent with the provisions of this Act. The powers,

rights, and duties conferred or imposed by the customs laws upon any officer or employee of the Treasury Department shall, for purposes of this Act, be exercised or performed by the Secretary or by such persons as he may designate.

(e) **REGISTRATION.**—(1) Any person who engages to any extent in business as an importer of fish or wildlife must register with the Secretary of the Treasury his name and the address of each place of business at which, and all trade names under which, he conducts such business.

(2) Any person required to register with the Secretary of the Treasury under paragraph (1) of this subsection shall—

(A) keep such records as will fully and correctly disclose each importation or exportation of fish or wildlife except nonendangered and nonthreatened shell fish or fishery products which are imported or exported for human or animal consumption or recreational purposes, made by him and the subsequent disposition made by him with respect to such fish or wildlife and

(B) at all reasonable times upon notice by a duly authorized representative of the Secretary, afford such representative access to his places of business, an opportunity to examine his inventory of imported fish or wildlife and the records required to be kept under subparagraph (A) of this paragraph and to copy such records.

(3) The Secretary of the Treasury, after consultation with the Secretary, shall prescribe such regulations as are necessary and appropriate to carry out the purposes of this subsection.

(f) **ENFORCEMENT REGULATIONS.**—(1) The Secretary, the Secretary of the Treasury, and the Secretary of the Department in which the Coast Guard is operating, are authorized to promulgate such regulations as may be appropriate to enforce this Act, and to charge reasonable fees for expenses to the Government connected with permits authorized by this Act, including processing applications and reasonable inspections, and the transfer, board, handling, or storage of fish, wildlife, or plants and evidentiary items seized and forfeited under this Act. All fees collected pursuant to this subsection shall be deposited in the Treasury to the credit of the appropriation which is current and chargeable for the cost of furnishing the services. Appropriated funds may be expended pending reimbursement from parties in interest.

(g) **CITIZEN SUITS.**—(1) Except as provided in paragraph (2) of this subsection, any person may commence a civil suit on his own behalf to enjoin any person, including the United States and any other governmental instrumentality or agency (to the extent permitted by the eleventh amendment to the Constitution), who is alleged to be in violation of any provision of this Act or regulation issued under the authority thereof. The district courts shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce any such provision or regulation, as the case may be.

(2) No action may be commenced—

(A) prior to sixty days after written notice of the violation has been given to the Secretary, and to any alleged violator of any such provision or regulation;

(B) if the Secretary has commenced action to impose a penalty pursuant to subsection (a) of this section; or

(C) if the United States has commenced and is diligently prosecuting a criminal action in the court of the United States or a State to redress a violation of any such provision or regulation.

(3) (A) Any suit under this subsection may be brought in the judicial district in which the violation occurs.

(B) In any such suit under this subsection in which the United States is not a party, the Attorney General, at the request of the

Secretary, may intervene on behalf of the United States as a matter of right.

(4) The court, in issuing any final order in any suit brought pursuant to paragraph (1) of this subsection may award costs of litigation (including reasonable attorney and expert witness fees) to any party, whenever the court determines such award is appropriate.

(5) The injunctive relief provided by this subsection shall not restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any standard or limitation or to seek any other relief (including relief against the Secretary or a State agency).

(h) **COORDINATION.**—The Secretary of Agriculture and the Secretary shall provide for appropriate coordination of the administration of this Act with the administration of the animal quarantine laws (21 U.S.C. 101-105, 111-135b, and 612-614) and section 306 of the Tariff Act of 1930 (19 U.S.C. 1306). Nothing in this Act or any amendment made by this Act, shall be construed as superseding or limiting in any manner the functions of the Secretary of Agriculture under any other law relating to prohibited or restricted importations or possession of animals and other articles. No proceeding or determination under this Act shall preclude any proceeding or be considered determinative of any issue of fact or law in any proceeding under any Act administered by the Secretary of Agriculture. Nothing in this Act shall be construed as superseding or limiting in any manner the functions and responsibilities of the Secretary of the Treasury under the Tariff Act of 1930, including, but not limited to, section 527 of such Act (19 U.S.C. 1527), relating to the importation of wildlife taken, killed, possessed, or exported to the United States in violation of the laws or regulations of a foreign country.

#### ENDANGERED PLANTS

SEC. 13. The Secretary of the Smithsonian Institution, in conjunction with other affected agencies, is authorized and directed to review species of plants which are endangered or threatened, and methods of providing adequate protection including legislation for such species. He shall report the results of such review to Congress, not later than one year after the date of enactment of this Act. For purposes of this section, there is authorized to be appropriated not to exceed \$250,000.

#### CONFORMING AMENDMENTS

SEC. 14. (a) Section 4(c) of the Act of October 15, 1966 (80 Stat. 928, 16 U.S.C. 668dd(c)), is further amended by revising the second sentence thereof to read as follows: "With the exception of endangered and threatened species listed by the Secretary pursuant to section 4 of the Endangered Species Act of 1973 in States wherein a cooperative agreement does not exist pursuant to section 6(c) of such Act nothing in this Act shall be construed to authorize the Secretary to control or regulate hunting or fishing of resident fish and wildlife on lands not within the System."

(b) Section 10(a) of the Migratory Bird Conservation Act (45 Stat. 1224, 16 U.S.C. 715i(a)) and section 401(a) of the Act of June 15, 1935 (49 Stat. 383, 16 U.S.C. 715(a)) are each amended by striking out "threatened with extinction," and inserting in lieu thereof the following: "listed pursuant to section 4 of the Endangered Species Act of 1973 as endangered or threatened species."

(c) Section 6(a)(1) of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 4601-9(a)(1)) is amended by striking out:

"THREATENED SPECIES.—For any national area which may be authorized for the preservation of species of fish or wildlife that are threatened with extinction," and inserting in lieu thereof the following:

"ENDANGERED AND THREATENED SPECIES.—

For lands, waters, or interests therein, the acquisition of which is authorized under section 5 of the Endangered Species Act of 1973, needed for the purpose of conserving, protecting, restoring, or propagating endangered or threatened species of fish, wildlife, or plants."

(d) The first sentence of section 2 of the Act of September 28, 1962 (76 Stat. 653; 16 U.S.C. 460k-1), is amended to read as follows:

"Sec. 2. The Secretary is authorized to acquire areas of land, or interests therein, which are suitable for—

"(1) incidental fish- and wildlife-oriented recreational development,

"(2) the protection of natural resources,

"(3) the protection of endangered or threatened species listed by the Secretary pursuant to section 4 of the Endangered Species Act of 1973, or

"(4) carrying out two or more of the purposes set forth in paragraphs (1) through (3) of this section,

and are adjacent to, or within, the said conservation areas, except that as acquisition of any land or interest therein pursuant to this section shall be accomplished only with such funds as may be appropriated therefore by the Congress or donated for such purposes, but such property shall not be acquired with funds obtained from the sale of Federal migratory bird hunting stamps."

(e) The Marine Mammal Protection Act of 1972 (16 U.S.C. 1361-1407) is amended—

(1) by striking out "Endangered Species Conservation Act of 1969" in section (1) (B) thereof and inserting in lieu thereof the following: "Endangered Species Act of 1973";

(2) by striking out "pursuant to the Endangered Species Conservation Act of 1969" in section 101(a) (3) (B) thereof and inserting in lieu thereof the following: "or threatened species pursuant to the Endangered Species Act of 1973";

(3) by striking out "endangered under the Endangered Species Conservation Act of 1969" in section 102(b) (3) thereof and inserting in lieu thereof the following: "an endangered or a threatened species pursuant to the Endangered Species Act of 1973"; and

(4) by striking out "Endangered Species List, authorized by the Endangered Species Conservation Act of 1969," in section 202(a) (6) thereof and inserting in lieu thereof the following: "endangered species list and threatened species list published pursuant to section 4(c) (1) of the Endangered Species Act of 1973".

#### REPEALER

SEC. 15. The Endangered Species Conservation Act of 1969 (sections 1 through 3 of the Act of October 15, 1966, and sections 1 through 6 of the Act of December 5, 1969; 16 U.S.C. 668aa-668cc-6) is repealed.

#### APPLICABILITY WITHIN STATES

SEC. 16. (a) STATE PLAN.—By the end of the first year after the date of enactment of this Act, a State may establish a plan for endangered and threatened species in accordance with this Act. A plan is in accordance with this Act if it meets or exceeds the requirements set forth in section 6(c) of this Act and represents an effective response to the Nation's need to conserve, protect, restore, and propagate endangered and threatened species of fish or wildlife. Upon the establishment of such a plan, the Governor or the head of the State agency shall promptly transmit a certified copy to the Secretary.

(b) DETERMINATION BY SECRETARY.—Within ninety days after the Secretary receives a certified copy of a State plan established under subsection (a) or subsection (d) of this section, the Secretary shall make a determination whether such State has established a plan for endangered and threatened

species in accordance with this Act. Unless the Secretary determines, pursuant to this section, that a State plan is not in accordance with this Act, the plan shall go into effect in such State on the date designated in the plan. In no event shall such State plan go into effect less than three months or more than nine months after the date of its establishment.

(c) PERIODIC REVIEW.—The Secretary shall periodically, but not less than once every three years, review each State plan for endangered and threatened species which has been approved under subsection (b) of this section and for which there is experience, to determine whether such plan is still in accordance with this Act and to evaluate the success of such plan in terms of the policy of this Act. To facilitate such review, the Governor or the head of the State agency in each such State shall submit to the Secretary periodically all information relevant and requested by the Secretary. The Secretary shall report to the President and Congress simultaneously each year on the results of such reviews, including any recommendations for legislation.

(d) NO STATE PLAN.—Except as to species listed in Appendix I of the Convention, the provisions of this Act regarding the management and taking of any State's resident species shall become applicable in their entirety within a State fifteen months after the date of enactment of this Act unless, prior to such date, the Secretary has made a determination under subsection (b) of this section that such State has established a plan for endangered and threatened species in accordance with this Act: *Provided*, That the provisions of subsection (a) of section 10 of this Act shall be effective upon the date of enactment of this Act within any State which does not prevent the taking of any species listed by the Secretary as an endangered species. If, at any time thereafter, the Secretary upon petition makes a determination, pursuant to subsection (b) of this section, that a State has established a plan for endangered and threatened species in accordance with this Act, such plan shall go into effect and the provisions of this Act regarding the management and taking of any species shall cease to be applicable or in effect within such State on a date to be designated by the Secretary. If, after a State plan in accordance with this Act is in effect within a State, the Secretary makes a determination, pursuant to subsection (c) of this section, that such plan is no longer in accordance with this Act, the provisions of this Act regarding the management and taking of any species shall go into effect within such State and such plan shall cease to be in effect on a date to be designated by the Secretary.

(e) PROCEDURE.—(1) Before making any determination under this section, the Secretary shall publish a notice in the Federal Register and afford the State and all interested parties a reasonable opportunity to present their views by oral and written submission.

(2) The Secretary shall notify in writing the Governor of the affected State of any determinations made under this section and shall publish these determinations with reasons therefor in the Federal Register.

(3) Any determinations made by the Secretary under this section shall be subject to judicial review in accordance with chapter V of title 5, United States Code, in the United States court of appeals for the circuit in which is located the State whose plan is the subject of such determination or in the United States Court of Appeals for the District of Columbia Circuit. Any such review shall be instituted within sixty days from the date on which the determination made by the Secretary is published in the Federal Register.

(f) EFFECTIVE DATE.—Except as otherwise provided in this section, the provisions of this

Act shall become effective in their entirety upon the date of enactment of this Act.

#### MARINE MAMMALS ACT

SEC. 17. CONFLICTS.—Except as otherwise provided in this Act, no provision of this Act shall take precedence over any more restrictive conflicting provision of the Marine Mammal Protection Act of 1972.

#### AUTHORIZATION FOR APPROPRIATIONS

SEC. 18. For purposes of this Act, other than section 6 and section 13 of this Act, there are authorized to be appropriated such sums as are necessary, not to exceed \$3,960,000 for the fiscal year ending June 30, 1974; not to exceed \$6,660,000 for the fiscal year ending June 30, 1975; and not to exceed \$8,870,000 for the fiscal year ending June 30, 1976.

The ACTING PRESIDENT pro tempore. The time for debate on this bill will be limited to 1 hour, to be equally divided and controlled by the majority leader and the minority leader or their designees, with 30 minutes on any amendment, debatable motion, or appeal.

The Senator from California is recognized.

Mr. TUNNEY. Mr. President, I yield to the Senator from Alaska.

Mr. STEVENS. I only wanted to have stated the time situation. I shall handle the bill for the minority.

The ACTING PRESIDENT pro tempore. The Senators from California and Alaska, according to the understanding of the Chair, are the designees of the majority leader and the minority leader.

Who yields time?

Mr. TUNNEY. Mr. President, the Endangered Species Act of 1973 is a vital piece of legislation which is absolutely necessary to provide protection to our Nation's species of wildlife that are threatened with extinction.

The goal of the Endangered Species Act is to conserve, protect, restore, and propagate species of fish and wildlife, that are in imminent danger of extinction or are likely to become endangered within the foreseeable future. This bill employs several mechanisms to insure the accomplishment of this goal. They include provision of greater authority to the Secretaries of Interior and Commerce to list endangered or threatened animals, encouragement of further international cooperation for the protection of these animals, provision for the acquisition of habitat useful for the purposes of this act, and incentives for the establishment of effective endangered species programs by the several States.

There is an urgent need for this type of protective legislation. In our country alone, there are 109 species listed as endangered by the Secretary of the Interior. On his foreign list, there are over 300 species. Furthermore, the situation continues to worsen. The rate of extinction has increased to a point where, on the average, one species disappears every year.

This is an extremely disturbing trend. To allow the extinction of animal species is ecologically, economically, and ethically unsound. Each species provides a service to its environment; each species is a part of an immensely complicated ecological organization, the stability of which rests on the health of its components. At present, we are unsure of

the total contribution of each species of fish and wildlife to the health of our ecology. To permit the extinction of any species which contributes to the support of this structure without knowledge of the cost or benefits of such extinction is to carelessly tamper with the health of the structure itself.

The existence of each species is also important to the growth of our scientific knowledge of man and his environment. Diversity of genetic types is necessary for thorough scientific knowledge. There is a yet unknown potential for investigation into these species' genetic structure which must remain unhindered if we wish to probe for further knowledge and the transfer of that knowledge into beneficial uses for man.

Finally, many of these animals simply give us esthetic pleasure. We like to view them in zoos and in their natural habitats. We, and our children, learn from these species about the diversity of our universe and the many forms of life which are necessary to support our bountiful and wonderful environment.

For these reasons, it is important that we adopt this act to protect our wildlife. In prior legislation we have taken several steps toward solution of the problem. In 1966 and in 1969, we provided the Secretary with the power to list species or subspecies of fish and wildlife that were threatened with extinction. Importation of these species from foreign countries was prohibited. Federal endangered wildlife reserves were encouraged by authorization of grants for land acquisition. However these provisions only gave limited protection to domestic endangered species; and the Federal grant program terminated last year. There is still no Federal prohibition against the taking of endangered species, still no widespread action to conserve and restore these animals, and the problem of the continuing extinction of species still exists.

The challenge before us now is to protect these species and their vital habitat and to restore their numbers to optimum levels. S. 1983 would accomplish this goal in several ways. First, it provides protection to a broader range of species by affording the Secretary the power to list animals which he determines are likely in the foreseeable future to become extinct, as well as those animals which are presently threatened with extinction. This gives the Secretary and the States which adopt endangered species management plans, the ability not only to protect the last remaining members of the species but to take steps to insure that species which are likely to be threatened with extinction never reach the state of being presently endangered.

The bill would thus hopefully, prevent a crisis situation from occurring for a number of species which would otherwise come close to extinction in future years. The two levels of classification facilitate regulations that are tailored to the needs of the animal while minimizing the use of the most stringent prohibitions. Since most of our resources for restoring and propagating species lie with the States, they are encouraged to use their discretion to promote the recovery of threatened species and Federal prohibitions

against taking must be absolutely enforced only for those species on the brink of extinction.

To aid in the delicate and highly specialized task of listing these animals, the Secretary is required to appoint an advisory committee to assist him in the designation of endangered and threatened species. To insure that the States that may be effected by the Secretary's designation are fully active through the listing process, the Secretary must consult with the States effected prior to listing any species. Furthermore, half the members of the advisory committee must be employed by State governments.

Many species have been inadvertently exterminated by a negligent destruction of their habitat. Their habitats have been cut in size, polluted, or otherwise altered so that they are unsuitable environments for natural populations of fish and wildlife. Under this bill, we can take steps to make amends for our negligent encroachment. The Secretary would be empowered to use the land acquisition authority granted to him in certain existing legislation to acquire land for the use of the endangered species programs. The bill also eliminates the restrictive ceiling which was placed on funds available to the Land and Water Conservation Fund Act by the Act of 1969. Through these land acquisition provisions, we will be able to conserve habitats necessary to protect fish and wildlife from further destruction.

Although most endangered species are threatened primarily by the destruction of their natural habitats, a significant portion of these animals are subject to predation by man for commercial, sport, consumption, or other purposes. The provisions in S. 1983 would prohibit the commerce in or the importation, exportation, or taking of endangered species except where permitted by the Secretary for scientific purposes in furtherance of the purpose of this act, or for the propagation of such species in captivity in a controlled habitat. Amendments which will be offered today, and which would greatly add to the purposes of this act would permit otherwise prohibited acts when they are undertaken to enhance the propagation or survival of the affected species or to prevent serious and otherwise unavoidable threats to human health or the environment.

In order to minimize economic hardship on persons who entered into contracts prior to the passage of the act, such persons are permitted for a limited period of time to engage in activities which would otherwise be in violation of the act.

Alaska Natives are allowed, under regulations to be adopted by the Secretary, to take animals for consumption or use in a native community or for the production of authentic native articles of handicraft or clothing.

Under the bill, the taking of an endangered species for their sale or movement in interstate or foreign commerce is forbidden. Violators of any prohibition under this bill will be liable for a civil penalty of up to \$10,000. Knowing violators of the law will be liable for a criminal penalty of up to \$20,000 and/or im-

prisonment for up to 1 year. The most important protective provisions of this bill are those which will improve the condition of existing species. These will be actions taken by the Secretary, the States, and individual citizens. However, we must extend some protection to animals subject to unrestrained predation.

Among the greatest contributions that have been made to the conservation, restoration, protection, and propagation of endangered and threatened species are the contributions made by private citizens. Exceptions to the prohibitions could be made by the Secretary wherever possible to encourage individual actions which will further the purposes of this act. Recent activities by the Secretary to prosecute individuals involved in harmless violations of prior acts which were part of programs designed to restore endangered species appear to have been taken counter to the purposes of our earlier legislation. Penalty provisions of this act are intended to be used to prevent activity which may be actually harmful to a species or its individual members and not merely to employ the law enforcement divisions of the departments.

I would like to discuss what is perhaps the most important section of this bill. Important because I believe it provides the most effective means to achieve the purposes of this bill. Undoubtedly, the threatened extinction of our wildlife is a national problem, necessitating involvement of the Federal Government. Endangered animals are not limited to any one area or State of the Nation so it is impossible for the individual States to limit their movement in interstate or foreign commerce. Furthermore, no one State should be responsible for balancing its interests, with those of other States, for the entire Nation. Central authority is necessary to oversee endangered species protection programs and to insure that local political pressures do not lead to the destruction of a vital national asset.

On the other hand, it was well established in the hearings record that most of the States possess much greater wildlife management resources than does the Federal Government. Clearly, any effort on the part of the Federal Government to encourage restoration of threatened or endangered species would fail without the assistance of the State agencies. This bill is designed to permit and encourage State endangered species programs that act in concert with the purposes of this act.

Subject to the provisions of this act which provide maximum protection for species on the brink of extinction, States with active endangered species programs are given full discretion to manage threatened species which reside within their boundaries. Under the bill, the States are given 1 year to submit plans, to the Secretary for the establishment of agencies for the promulgation, conservation, restoration, and protection of resident endangered species. Provisions of this act governing the taking and management of endangered species go into effect 15 months after the passage of this act only for those States where



the submitted plans have not been approved by the Secretary.

Further, States, whose plans have been approved by the Secretary, are eligible for a portion of the \$10 million provided under this act for financial assistance to defer the cost of implementation. In the case where a State plan is not initially approved by the Secretary, and the Secretary must intervene to insure furtherance of the purposes of this act, a State may reapply at any time for approval of its plan. A State's power to manage endangered species is preempted only to the extent that such State does not prevent taking of endangered species—that is, species which are in imminent danger of extinction. Even in these cases, States whose plans have not been disapproved by the Secretary would have management powers not inconsistent with the prohibitions against taking.

The plan for Federal-State cooperation provides for much more extensive discretionary action on the part of the Secretary and the State agencies. Under existing laws, a species must be declared "endangered" even if in a certain portion of its range, the species has experienced a population boom, or is otherwise threatening to destroy the life support capacity of its habitat. Such a broad listing prevents local authorities from taking steps to insure healthy population levels.

Under S. 1983, however, the Secretary may list an animal as "endangered" through all or portion of its range. An animal might be "endangered" in most States but overpopulated in some. In a State in which a species is overpopulated, the Secretary would have the discretion to list that animal as merely threatened or to remove it from the endangered species listing entirely while still providing protection in areas where it was threatened with extinction. In that portion of its range where it was not threatened with extinction, the States would have full authority to use their management skills to insure the proper conservation of the species. Also, upon passage of S. 1983, Federal prohibitions against taking would apply only in those States which did not prevent the taking of endangered species. Fifteen months after the passage of the act, the act's provisions would apply only in those States which had not adopted a management plan approved by the Secretary.

A well-known example may serve to illustrate how S. 1983 provides for maximum management and conservation discretion, while insuring absolute protection for species imminently in danger of extinction. The American alligator, which has been plagued by habitat destruction and commercial exploitation, is currently listed as an endangered species. However, due to increased population resulting in habitat destruction, the Louisiana Wildlife and Fisheries Commission ended total protection last year and conducted a closely regulated harvest in one parish of the State. According to the Department of the Interior, it is likely that in certain portions of Louisiana, the American alligator may be re-listed under this bill as a threatened species. S. 1983 would permit continued

State action to enhance the existence of this species. In other areas the alligator would remain listed as an endangered species and would be entitled to absolute Federal or State protection until a State plan was approved by the Secretary under the provisions of this act.

Should a State decide not to adopt an endangered species protection program, under this bill, as I propose it be amended, that State could always secure a permit from the Secretary to exempt animals from the prohibitions of this act in order to permit management of a species, then listed as endangered, to enhance the propagation or survival of the affected species. However, I hope that, as soon as possible after the passage of this act, all of the State will formulate plans for the management of resident endangered species and that these plans can be approved by the Secretary so that enlightened management programs can continue under the control of the States.

I feel that this bill provides the necessary national protection to severely endangered species while encouraging the States to utilize all of their resources toward the furtherance of the purposes of this act. State participation is necessary for the protection of endangered and threatened species. This bill provides them the authority and additional funds with which to provide that protection. Only those States who are unwilling to adopt endangered species protection programs to provide protection for species threatened with extinction need fear Federal preemption.

Finally, while we are concerned with our endangered domestic species, we must not forget the many animals that are in need of worldwide attention. S. 1983 includes the mechanisms of international cooperation that fulfill our commitments under international conventions for the protection of endangered species. This Nation has dedicated itself for international cooperation through several international treaties. S. 1983 extends this cooperation by permitting the President to use certain blocked Federal funds to provide assistance for the development of management programs in foreign countries, and to offer educational training for foreign personnel in wildlife management. The bill also permits loans for the development of protection agencies in foreign countries. And, the bill provides mechanisms for implementation of the Convention on International Trade and Endangered Species of Wild Flora and Fauna which was signed by representatives from the United States last March and is now pending ratification by the Senate.

As we consider this bill, we must remember the magnitude of the problem and the importance of our concern. We are dealing with the future of many species of fish and wildlife—species which in many cases we have placed near extinction from carelessness and a lack of understanding of their importance. These animals are part of our natural resources, part of our history, and part of our evolutionary heritage. We have a duty to restore what we have endangered—for ourselves and for posterity.

This bill is a step toward that necessary restoration. I urge Senators' favorable consideration.

The ACTING PRESIDENT pro tempore. Who yields time?

Mr. STEVENS. Mr. President, I am pleased to support the Endangered Species Act of 1973.

While the bill is not perfect, I believe it takes a major step in the protection of American endangered and threatened species. It will provide for the conservation of endangered fish and wildlife by prohibiting the taking of these species and also by encouraging the establishment of State programs. It retains the present bifurcation of responsibility between the Departments of Interior and Commerce over different species. It extends protection to species which are either endangered or likely to become endangered within the foreseeable future. It expands the protection of the Endangered Species Conservation Act of 1969 (85 Stat. 275). That act mainly prohibited the importation of foreign species. This legislation extends protection to domestic species. That act also implemented State statutes. This act will permit national listings of species as either endangered or threatened and also impose Federal prohibitions on their taking.

This legislation was the subject of extensive hearings last Congress in the Senate Environment Subcommittee. The former Senator from Virginia (Mr. Spong) and I heard a number of knowledgeable witnesses from governmental agencies and also from various private groups. They were, almost uniformly, of the opinion that such legislation was necessary for the protection of endangered species.

As former Senator Spong said:

Extinction is quite literally a fate worse than death.

I agree.

This bill is designed to provide the Secretary of the Interior and the Secretary of Commerce with the authority to list a species as either endangered or threatened if its habitat or range is threatened with destruction, it is overutilized and taken in great numbers, it is the victim of disease or predation, it is out of balance with its environment, or natural or manmade factors adversely affect its continued existence.

The Secretaries must use the best scientific data to make this determination. They are to consult with all necessary persons and are to publish such a list in the Federal Register. They may periodically review this list upon the petition of any interested party.

For this purpose they are to establish an advisory committee on endangered and threatened species. This advisory committee was recommended by the State departments of fish and game to give them additional input. It will insure that the Secretaries have the very best possible advice before they list any species or delist it.

Section 5 is particularly important. Under it they are to establish particular programs to protect and conserve fish and wildlife listed as endangered and threatened. They are to acquire land for



this purpose and may also utilize other Federal lands for this purpose.

Section 6 and 16 provide for cooperation with the States. They provide the major backbone of the act. Presently the States have an extensive network of endangered species legislation. Unfortunately, not all States have as yet implemented such programs. This bill will assist those States not yet involved to implement such programs and will, if the States do not, provide for Federal preemption.

Typical are the laws of Alaska, Illinois, and Texas. Alaska, for example, requires the State government to preserve the natural habitat of species or subspecies of fish and wildlife that are recognized as threatened with extinction. The language is very similar to S. 1983. The Alaska State commissioner of fish and game is required to seek the advice and recommendations of biological experts. Before anyone may take an endangered animal, he must obtain a special permit from the commissioner of fish and game which may only be given "for scientific or educational purposes, or for propagation in captivity for the purpose of preservation." The State statute also provides criminal penalties for anyone violating it.

I ask unanimous consent to have printed in the RECORD at this point the text of the Alaska State endangered species law.

There being no objection, the text was ordered to be printed in the RECORD, as follows:

#### ARTICLE 4. ENDANGERED SPECIES

##### Section

180. Declaration of purpose

185. Protection of habitat

190. Determining endangered species

195. Permit for taking endangered species

200. Penalty

210. Definitions

Sec. 16.20.180. Declaration of purpose. The legislature recognizes that, due to growth and development, certain species or subspecies of fish and wildlife are now and may in the future be threatened with extinction. The purpose of §§ 180-210 of this chapter on to establish a program for their continued conservation, protection, restoration and propagation. (§ 1 ch 115 SLA 1971)

Sec. 16.20.185. Protection of habitat. On land under their respective jurisdictions, the commissioner of fish and game and the commissioner of natural resources shall take measures to preserve the natural habitat of species or subspecies of fish and wildlife that are recognized as threatened with extinction. (§ 1 ch 115 SLA 1971)

Sec. 16.20.190. Determining endangered species. (a) A species or subspecies of fish or wildlife is considered endangered when the commissioner of fish and game determines that its numbers have decreased to such an extent as to indicate that its continued existence is threatened. In making this determination the commissioner of fish and game shall consider

(1) the destruction, drastic modification, or severe curtailment of its habitat;

(2) its overutilization for commercial or sporting purposes;

(3) the effect on it of disease or predation;

(4) other natural or man-made factors affecting its continued existence.

(b) After making a determination under (a) of this section, the commissioner of fish and game shall, in accordance with the Administrative Procedure Act (AS 44.62), pub-

lish a list of the species or subspecies of fish and wildlife that are endangered. The commissioner shall, at least once every two years thereafter, conduct a thorough review of the list to determine what changes have occurred concerning the species or subspecies listed. Consideration of existing species or subspecies of fish and wildlife for listing under this section shall be made on a continuing basis. The review of listed species or subspecies conducted under this section shall be submitted in writing to the governor and the legislature and shall be made available to the public.

(c) In making his determination and review under (a) and (b) of this section, the commissioner of fish and game shall seek the advice and recommendation of interested persons and organizations, including but not limited to ornithologists, ichthyologists, ecologists and zoologists. (§ 1 ch 115 SLA 1971)

Sec. 16.20.195. Permit for taking endangered species. No species or subspecies of fish or wildlife listed as endangered under § 190 (b) of this chapter may be harvested, captured or propagated except under the terms of a special permit issued by the commissioner of fish and game for scientific or educational purposes, or for propagation in captivity for the purpose of preservation. (§ 1 ch 115 SLA 1971)

Sec. 16.20.200. Penalty. A person who, without a permit issued under § 195 of this chapter, harvests, injures, imports, exports, or captures a species or subspecies of fish or wildlife listed under § 190 of this chapter, is guilty of a misdemeanor. (§ 1 ch 115 SLA 1971)

Sec. 16.20.210. Definitions. In §§ 180-210 of this chapter "fish or wildlife" includes birds. (§ 1 ch 115 SLA 1971)

Mr. STEVENS. The Illinois State statute lists a number of domestic and foreign species and makes it unlawful to "possess, sell, order for sale, give or dispose of any animal or the wild animal product of any animal which is an endangered species under this act" without obtaining a permit. Such permits may be given only for "zoological, educational or scientific purposes." It provides for fines and imprisonment for persons violating this act.

Mr. President, I ask unanimous consent that the text of the Illinois Endangered Species Act be printed in the RECORD at this point.

There being no objection, the text was ordered to be printed in the RECORD, as follows:

#### ILLINOIS ENDANGERED SPECIES ACT

An Act to prohibit the transfer, sale and possession of products or skins of animals in danger of extinction, to create a Board to determine which species are endangered and to provide penalties for the violation thereof, and to make an appropriation therefor.

Be it enacted by the People of the State of Illinois, represented in the General Assembly:

Section 1. This Act shall be known and may be cited as the "Illinois Endangered Species Protection Act."

Section 2. As used in this Act the following words have the following meanings:

"Board" means the Endangered Species Protection Board created by this Act.

"Department" means the Department of Conservation and "Director" means the director of that Department.

"Endangered Species" means the species of animals listed in this Section plus such other species as the Board deems to be in danger of extinction. This includes but is not limited to the following species: leopard, *Panthera pardus*; snow leopard, *Panthera unica*;

clouded leopard, *Neofelis nebulosa*; tiger, *Panthera tigris*, cheetah, *Acinonyx jubatus*; alligators, crocodiles and all other members of the order crocodylia; vicuna, *Vicugna vicugna*; red wolf, *Canis niger*; gray wolf, *Canis lupus*; polar bear, *Thalarcotos maritimus*; mountain lion, sometimes called cougar, *Felis wiedii*; desert kit fox, *Vulpes macrotis*; kit or swift fox, *Vulpes velox*; Pacific Ridley turtle or warana, *Lepidochelys olivacea*; or green turtle, *Chelonia mydas*.

"Wild animal product" means the fur, hide, skin, teeth, feathers, tusks, claws or the body or any portion thereof whether in a green or raw state or as a product manufactured or refined from an animal protected under this Act or under regulations issued pursuant to this Act.

Section 3. After January 1, 1973, it is unlawful to possess, sell, order for sale, give or dispose of any animal or the wild animal product of any animal which is an endangered species under this Act, without a permit therefor issued by the Department.

Section 4. Upon proper application, the Department shall issue to any person, firm, association or corporation a permit which allows the possession, purchase and disposal of live animals or wild animal products of an endangered species for zoological, educational or scientific purposes only. Such permit shall be issued without fee. The holder of such permit and all applicants therefor shall submit a list of all animals and wild animal products of endangered species owned or in their possession when ordered by the Director, but no more often than annually. The Director may, upon notice and hearing, revoke the permit of any holder thereof upon his failure to file the reports required by this Section or the filing of a knowingly false report or the use of any wild animal product or animal of an endangered species for any purpose other than an educational, zoological or scientific purpose.

Section 5. Upon proper application, the Department shall issue a limited permit to any person, firm, association or corporation which had in its possession prior to the effective date of this Act, wild animal product of an endangered species. Such permit shall specifically name and describe each wild animal product possessed by the permit holder and shall be valid only for possession of the products so named. The Department may require proof that acquisition of such wild animal product was made before the effective date of this Act. Such permit shall be valid as long as the product is in existence. The limited permit may be revoked by the Director for any violation of this Act.

Section 8. Any officer or agent authorized by the Department or Conservation, or any police officer of any municipality within the State of Illinois, may execute any warrant to search for and seize any goods, merchandise or wildlife sold or offered for sale in violation of this Section, or any property or item used in connection with a violation of this Section. Such goods, merchandise, wildlife or property shall be held pending proceedings in any court of proper jurisdiction. Upon conviction, such seized goods, merchandise or wildlife shall be forfeited and, upon forfeiture, either offered to a recognized institution for scientific or educational purposes, or destroyed.

Section 9. Any person who violates any provision of this Act shall be fined not less than \$100 nor more than \$1,000 or imprisoned for not more than one year in a penal institution other than the penitentiary, or both.

Section 10. All fines collected under this Act shall be paid to the State Treasurer and deposited in the Game and Fish Fund.

Mr. STEVENS. A third example is the Texas Endangered Species Act. This was signed into law this May. It implements the present Federal statutes and also closely follows the wording of S. 1983. It

requires permits before any species may be taken for zoological or scientific purposes if that species has been classified as endangered. It also provides criminal penalties.

Mr. President, I ask unanimous consent that the text of the Texas Endangered Species Act be printed in the RECORD at this point.

There being no objection, the text was ordered to be printed in the RECORD, as follows:

#### TEXAS ENDANGERED SPECIES BILL

An act relating to the conservation, management, protection, propagation, sale, and use of nongame fish and wildlife species; relating to the classification of certain fish and and wildlife as endangered species, and the protection, propagation, sale, and use of endangered species and products of endangered species; providing penalties for violations; and declaring an emergency

Be it enacted by the Legislative of the State of Texas:

Section 1. Definitions.—As used in this Act:

(1) "Director" means the executive director of the parks and wildlife department.

(2) "Department" means the parks and wildlife department.

(3) "Fish or wildlife" means any wild mammal, fish, wild bird, amphibian, reptile, mollusk, or crustacean, or any part, product, egg, offspring, dead or alive, of a wild mammal, fish, wild bird, amphibian, reptile, mollusk, or crustacean.

(4) "Person" means any individual, firm, corporation, association, or partnership.

(5) "Management" means the collection and application of biological information for the purposes of increasing the number of individuals within species and populations of wildlife up to the optimum carrying capacity of their habitat and the maintaining of such levels. The term "management" likewise includes the entire range of activities constituting a full scientific resource program including, but not limited to, research, census, law enforcement, habitat acquisition and improvement, and education. Also included within the term, when and where appropriate, is the periodic or total protection of species or populations as well as regulated taking.

Sec. 2. Nongame species. (a) The department shall conduct investigations on nongame fish and wildlife in order to develop information relating to population, distribution, habitat needs, limiting factors, and other biological and ecological data to determine management measures necessary for their continued ability to sustain themselves successfully. On the basis of such determination, the department shall issue proposed regulations not later than one year from the effective date of this Act and develop management programs designed to insure the continued ability of nongame fish and wildlife to perpetuate themselves successfully. The proposed regulations shall set forth species or subspecies of nongame wildlife which the department deems in need of management pursuant to this section, giving their common and scientific names by species and subspecies. The department shall conduct ongoing investigations of nongame fish and wildlife and may from time to time amend such regulations by adding or deleting therefrom species or subspecies of nongame wildlife.

(b) The department shall by regulations establish proposed limitations relating to taking, possession, transportation, exportation, processing, sale or offer for sale, or shipment as may be deemed necessary to manage nongame fish and wildlife. The regulations shall become effective 60 days after being proposed and during that period pub-

lic comment shall be solicited. The department shall hold a public hearing, notice of which shall be published in at least three major newspapers of general circulation in this state at least one week prior to the hearing date. On the basis of public comments received or the testimony at a hearing the department may make such changes in the proposed regulations as are consistent with effective management of nongame fish and wildlife.

Sec. 3. Endangered species. Fish or wildlife are classified as endangered species if they appear on:

(1) the present United States List of Endangered Foreign Fish and Wildlife (50 C.F.R. Part 17, Appendix A);

(2) the present United States List of Endangered Native Fish and Wildlife (50 C.F.R. Part 17, Appendix D); or

(3) the list filed by the director under this Act of fish or wildlife threatened with statewide extinction.

Sec. 4. Statewide extinction. Fish or wildlife may be classified by the director as threatened with statewide extinction if the department finds that the continued existence of the fish or wildlife is endangered in this state due to any of the following factors:

(1) the destruction, drastic modification, or severe curtailment of its habitat;

(2) the over-utilization of it for commercial or sporting purposes;

(3) the effect on it of disease or predation; or

(4) other natural or man-made factors affecting its continued existence.

Sec. 5. Initial classification by director. Within 45 days after the effective date of this Act, the department shall file with the secretary of state a proposed list of fish or wildlife threatened with statewide extinction. This list shall become effective on the 45th day after the date it is filed. Before the effective date of the proposed list, the department shall hold a public hearing on the proposed list. Notice of the hearing shall be published in at least three major newspapers of general circulation in this state at least one week prior to the hearing date. The proposed list may be amended prior to its effective date.

Sec. 6. Classification amendment by director. (a) If the federal lists set out in Section 3 of this Act are subsequently altered, the director shall file an order with the secretary of state accepting the alteration. The order is effective immediately.

(b) The department may amend the list filed under Section 5 of this Act by filing an order with the secretary of state. Notice of the intent to file the order and the contents of the proposed order must be given 60 days prior to the date of filing. If petition procedures set out in Section 7 of this Act are initiated relating to the contents of the proposed order during the 60-day notice period, the order may not be filed until the conclusion of the proceedings. The order is effective on the date of filing.

Sec. 7. Petition for reclassification. (a) On the petition of three interested persons presenting substantial scientific evidence for the addition or deletion of fish or wildlife classified as threatened with statewide extinction, the department may conduct a review of the classification and file an order with the secretary of state adding or deleting fish or wildlife from the list of fish or wildlife threatened with statewide extinction.

(b) If the department refuses to conduct a review of the classification of fish or wildlife threatened with statewide extinction under Subsection (a) of this section, a petition of 50 interested persons presenting scientific evidence for the addition or deletion of fish or wildlife classified as threatened with statewide extinction may be presented to the department. On receipt of this petition, the department must hold a public hearing to review the classification. Notice

of the hearing shall be published in at least three major newspapers of general circulation in this state at least one week prior to the hearing date. Based on findings from the public hearing, the department may file an order with the secretary of state adding or deleting fish or wildlife from the list of fish or wildlife threatened with statewide extinction.

(c) Orders filed under this section are effective immediately.

Sec. 8. Use of name for sale. No person may advertise, offer for sale, or sell any other species of fish or wildlife under the name of any fish or wildlife classified as an endangered species.

Sec. 9. Permit to take certain fish or wildlife. (a) No person may take, possess, or transport fish or wildlife classified as endangered species for zoological gardens or scientific purposes or take or transport fish or wildlife classified as endangered species from the wild or from their natural habitat for propagation for commercial purposes, unless he has obtained a permit under Article 913, Penal Code of Texas, 1925, as amended, or under a federal permit.

(b) A permit may not be granted under Article 913, Penal Code of Texas, 1925, as amended, if the taking, possessing, or transporting of the fish or animal classified as an endangered species is specifically prohibited by federal law.

(c) The department may refuse to grant a permit to take or transport fish or wildlife classified as an endangered species from the wild or from their natural habitat for propagation for commercial purposes if the fish or wildlife may be legally obtained from a source in this state other than the wild or its natural habitat.

(d) Fish or wildlife classified as an endangered species shall be considered and included within the meaning of "protected fish or wildlife" as that term is used in Article 913, Penal Code of Texas, 1925, as amended.

(e) Failure to comply with this section is a violation of this Act. Failure to comply with the terms of a permit issued under Article 913, Penal Code of Texas, 1925, as amended, is a violation of that article.

(f) The provisions of this Act do not apply to the possession of mounted or preserved endangered species by public or private non-profit educational, zoological, or research institutions held prior to the effective date of this Act. The department may require such institutions to furnish a list of mounted or preserved endangered species which they hold, together with adequate proof of the time of acquisition.

Sec. 10. Propagation. No person may possess fish or wildlife classified as endangered species for the purpose of propagating them for sale unless he has obtained a commercial propagation permit issued under this Act.

Sec. 11. Original commercial propagation permit. (a) An applicant for an original commercial propagation permit must submit to the department the permit fee of \$300 and an application containing information or statements required by the department.

(b) The department shall issue an original commercial propagation permit to an applicant on compliance with Subsection (a) of this section if the department is satisfied that the fish or wildlife to be used for initial breeding stock was acquired by the applicant for commercial propagation purposes under Section 9 of this Act, federal rules, regulations, or permits, or from a person or source authorized to possess, sell, or dispose of the fish or wildlife under the laws of this state, another state, or federal law.

(c) Each original commercial propagation permit which is issued shall contain a description of the fish or wildlife classified as an endangered species which may be possessed by the permit holder.

(d) An original commercial propagation permit expires one year from the date of issuance.

Sec. 12. Renewal commercial propagation permit. (a) The department shall renew a commercial propagation permit on receipt of an application and the \$550 renewal fee prior to or within 10 days of the expiration date of the permit.

(b) A renewal commercial propagation permit expires three years from the date of issuance and may be renewed under the same conditions as renewal of the original permit.

(c) The department may refuse to renew any permit when it is deemed to be in the best interest of the species.

Sec. 13. Duty of permittee. A person holding a commercial propagation permit must submit annually to the department:

(1) a written report by a veterinarian licensed to practice in this state containing an evaluation of the physical conditions of the propagation facilities and the condition of the fish or wildlife held by the permit holder; and

(2) a written report by the permit holder on forms prepared by the department relating to the general propagation activity during the previous year.

Sec. 14. Refusal of cancellation of permit.

(a) If, on the basis of the reports required by Section 13 of this Act or from an investigation or inspection of an authorized employee of the department, the department finds that a permit holder is improperly caring for or handling the fish or wildlife held under the permit, the department shall give written notice of the objectionable actions or conditions to the permit holder.

(b) If the department finds that the improper caring for or handling of the fish or wildlife is detrimental to the fish or wildlife and the fish or wildlife need immediate protection, the department may seize the fish or wildlife and authorize proper care pending the correction of the improper conditions or actions.

Sec. 15. Appeal. (a) A person whose application for a commercial propagation permit or for renewal of a commercial propagation permit has been refused by the department or whose permit has been cancelled may take an appeal within 20 days from the date of refusal to any district court of Travis County or to any district court of the county of his residence.

(b) A case reviewed under the provisions of this section proceeds in the district court by trial de novo as that term is used and understood in appeals from justice of the peace courts to the county courts of this state. Appeal from the judgment of the district court lies as in other civil cases.

Sec. 16. Disposition of fish or wildlife. A person who holds a commercial propagation permit and fails to renew the permit or his renewal application is denied, or whose permit is cancelled under Section 14 of this Act, must dispose of the fish or wildlife held under Section 14 of this Act, must dispose of the fish or wildlife held under the permit and any increase in the fish or wildlife in the manner specified by the department.

Sec. 17. Rules and regulations. The department shall make rules and regulations to administer the provisions of this Act including:

(1) permit application forms, fees, and procedures;

(2) hearing procedures;

(3) procedures for identifying fish or wildlife classified as endangered species which may be possessed, propagated, or sold under the provisions of this Act;

(4) publication and distribution of lists of the species or subspecies of fish or wildlife or products of fish or wildlife classified as endangered species; and

(5) other rules and regulations necessary to attain the objectives of this Act.

Sec. 18. Disposition of Funds. Money received from the issuance of permits under this Act or from violations of this Act shall be deposited by the department in the

state treasury to the credit of the general revenue fund.

Sec. 19. Sale of fish or wildlife classified as endangered species. (a) No person may sell, process, offer for sale, advertise for sale, or distribute fish or wildlife classified as endangered species unless the fish or wildlife have been lawfully born and raised in captivity for commercial purposes under the provisions of this Act or federal law.

(b) No person may sell, process, offer for sale, advertise for sale, or distribute goods made from fish or wildlife classified as endangered species unless the goods were made from fish or wildlife which were lawfully born and raised in captivity for commercial purposes under the provisions of this Act or federal law.

(c) Fish or wildlife classified as endangered species or goods made from fish or wildlife classified as endangered species sold under this section must be tagged or labeled in a manner to indicate compliance with this section.

Sec. 20. Exemptions. The provisions of this Act do not apply to coyotes (prairie wolves), cougars, bobcats, prairie dogs or red foxes.

No provision of this Act shall apply to any animals, fish or fowl which are privately owned animals, fish or fowl by the private owners of such animals, fish or fowl.

Sec. 21. Enforcement. (a) The provisions of this Act shall be enforced by the department.

(b) Any commissioned peace officer in this state, including game management officers commissioned as peace officers in this state may execute a warrant to search for and seize fish or wildlife or goods made from fish or wildlife taken, sold, or possessed in violation of this Act or the rules and regulations issued under this Act.

(c) An officer who has made an arrest of a person for a violation of this Act or the rules and regulations issued under this Act may search the person at the time of arrest and seize fish or wildlife, or goods made from fish or wildlife, taken, possessed, or made in connection with a violation of this Act or the rules and regulations issued under this Act.

(d) Fish or wildlife, or goods seized under this section shall be delivered to the department and held by the department pending disposition of court proceedings. Subsequent to the disposition of court proceedings, the department shall dispose of fish or wildlife, and goods in accordance with rules and regulations established by the department. Any costs of maintenance for fish or wildlife seized under this section incurred by the department during the pendency of court proceedings may be assessed to the defendant.

Sec. 22. Penalty. A person who violates a provision of this Act or a rule or regulation issued under this Act is guilty of a misdemeanor and on first conviction is punishable by a fine of not less than \$100 nor more than \$200. A person who is convicted for a second violation of a provision of this Act or a rule or regulation issued under this Act is punishable by a fine of not less than \$200 nor more than \$500, or confinement in the county jail for not less than 30 days nor more than 90 days, or both. A person who is convicted for a third or subsequent violation of a provision of this Act or a rule or regulation issued under this Act is punishable by a fine of not less than \$500 nor more than \$2,000, and confinement in the county jail for not less than six months nor more than one year.

Sec. 23. Conflict of laws. Any species or subspecies of fish or wildlife classified as an endangered species shall be governed exclusively by the provisions of this Act and no other regulatory or licensing laws of this state shall be applicable. This Act does not repeal Article 913, Penal Code of Texas, 1925, as amended.

Sec. 24. Funding. Funds for the administration of this Act may be appropriated from the general revenue fund by legislative appropriation.

Sec. 25. Issuance of permits on effective date. Any person who is engaged in the business of commercial propagation of a species of fish or wildlife classified as an endangered species on the effective date of this Act, may obtain a permit under Section 11 of this Act regardless of the method in which the fish or wildlife were initially obtained. Application for a permit under this section must be submitted within 120 days from the effective date of this Act.

Sec. 26. Effective date. Subsection (b) of Section 19 of this Act shall become effective September 1, 1974.

Sec. 27. Emergency. The importance of this legislation and the crowded condition of the calendars in both houses create an emergency and an imperative public necessity that the constitutional rule requiring bills to be read on three several days in each house be suspended, and this rule is hereby suspended, and that this Act shall take effect and be in force according to its provisions, and it is so enacted.

Mr. STEVENS. These then are but three examples of the many State laws on the subject.

As Dr. Ralph MacMullan, president of the International Association of Game, Fish, and Conservation Commissioners, stated last year in hearings before our subcommittee, State wildlife agencies employ presently over 5,800 enforcement officers across the Nation. Formal endangered species programs are being implemented in over 30 States. The three I have just had printed in the RECORD are but examples.

The International Association of Game, Fish, and Conservation Commissioners have promulgated a model State bill relating to funding and authorization for improved nongame and endangered species programs. This is set forth on pages 164-168 of the hearing record, S. 92-81 of the Senate Commerce Committee. I will not ask that that be reprinted, but merely incorporated by reference.

But even Dr. MacMullen believed that the Federal Government has a definite role in this area to insure that minimum standards are set and to assist the States in their responsibility for managing resident species.

Dr. MacMullen indicated that there are only two Federal enforcement people in Michigan and there are 200 full-time conservation officers and another 200 part-time employees in the same State in 83 counties. In other words, in Michigan there are an average of over two full-time conservation officers plus a number of other peace officers in each county to enforce State laws. These State and local law enforcement officials enforce Federal as well as State laws. He said "we perform the legwork." This is true nationwide. He also indicated that if the Federal Government were to take away the right of the States to manage these species and to preempt the States. State legislatures would not be willing to appropriate the necessary funds to protect endangered species.

This is, as a practical matter, what has happened in the ocean mammal bill. The Federal Government has preempted the States and has not provided

enough money to manage the program. Thus there is no enforcement agency to protect ocean mammals. This is the reason that the Endangered Species Act of 1973 provides for a larger role for States and why there has been less opposition to it. I strongly support this trend.

Sections 6 and 16 of this legislation require the Secretaries to consult with the States before the acquisition of any lands, waters or interests therein for the protection of an endangered species. Cooperative agreements may be entered into. Financial assistance may be given to the States for this purpose. Specific requirements for the States are listed. Periodic review is required also. Section 16 specifically provides that by the end of the first year after the date of enactment each State may establish a plan in accordance with this act to protect endangered and threatened species. The Secretary must make a determination as to whether the plan meets the requirements of the act. Periodic review is also required. States are given 15 months to conform their statutes to the provision of this act. If not, they are subject to Federal preemption. I shall offer an amendment shortly to improve this section.

Financial assistance and encouragement of international efforts in the conservation of endangered species are also encouraged. This is particularly important for many of the migratory species involved.

Stringent prohibitions against unlawful taking or importation are also included.

There is set forth a specific exception for undue economic hardship. Because of certain technical problems with this section, I shall speak on it at some length when I offer an amendment on this later this morning.

There is also a specific exception for Alaska Natives. This was written utilizing the Marine Mammal Protection Act of 1972 (86 Stat. 1027) as a guide and was reviewed in detail with my staff and is entirely agreeable to me. I believe it provides the protection necessary for Alaskan Natives. Many of the technical changes were made as a result of certain problems we have found in the implementation of the marine mammal bill and certain questions that have subsequently been raised by those agencies in enforcing that act. Hopefully this will eliminate many of these ambiguities and will also, I intend, clarify our original interpretation of the Marine Mammal Protection Act.

It was my specific intent in this subsection to obviate the problems I mentioned in my several letters to the Departments of the Interior and Commerce on the Marine Mammal Protection Act. By passing this section, the Senate will be again indicating our congressional intent on each of these points.

Section 17 discusses the relationship of this act with the Marine Mammal Protection Act. A similar provision is found in section 11(d). It is important to note that certain of the provisions in that subsection will affect marine mammals and that, as specified in that subsection, they will take precedence over

the Marine Mammal Protection Act of 1972.

One final point, last year at my request this legislation was not taken up on the Senate floor after being reported out of the Senate Commerce Committee.

That report, S. 92-1136, set forth my supplemental views also. I did not oppose this legislation at that time and I do not now. As I stated then:

I agree with the majority of the committee that legislation embodying the concepts in this bill is necessary.

I went on to state that time remaining in that congressional session was too short to permit the care and deliberation essential to the drafting and passage of legislation of this magnitude. The necessary time and care has since been spent. I believe we have a good bill in S. 1983 and am very pleased to have been designated the Republican floor manager for it.

Mr. President, in the United States there are 109 species and subspecies of wildlife—14 mammals, 50 birds, 7 reptiles, and 30 fish species—now threatened with extinction. These include such animals as the black-footed ferret, the whooping crane, the eastern timber wolf, the masked bobwhite, the ivory-billed woodpecker, and peregrine falcons. These are only domestic endangered species and do not include foreign endangered species.

Of this number, eight species, including the eastern cougar and the Mississippi sandhill crane, were listed on June 1 of this year.

I ask unanimous consent to have printed in the RECORD at this point, a list of the endangered species so specified by the Secretary of the Interior prior to June 1 and a second list of the additional species listed on June 1 of this year.

There being no objection, the lists were ordered to be printed in the RECORD, as follows:

#### ENDANGERED SPECIES

##### MAMMALS

Hawaiian hoary bat, *Lasiurus cinereus semotus*.  
Indiana bat, *Myotis sodalis*.  
Delmarva Peninsula fox squirrel, *Sciurus niger cinereus*.  
Morro Bay kangaroo rat, *Dipodomys heermanni morroensis*.  
Salt marsh harvest mouse, *Reithrodontomys raviventris*.  
Eastern timber wolf, *Canis lupus lycaon*.  
Red wolf, *Canis rufus*.  
San Joaquin kit fox, *Vulpes macrotis mutica*.  
Black-footed ferret, *Mustela nigripes*.  
Florida panther, *Felis concolor coryi*.  
Florida manatee (sea cow), *Trichechus manatus latirostris*.  
Key deer, *Odocoileus virginianus clavium*.  
Columbian white-tailed deer, *Odocoileus virginianus leucurus*.  
Sonoran pronghorn, *Antilocapra americana sonoriensis*.

##### BIRDS

Hawaiian dark-rumped petrel, *Pterodroma phaeopygia sandwichensis*.  
California least tern, *Sterna albifrons browni*.  
Hawaiian goose (nene), *Branta sandvicensis*.  
Aleutian Canada goose, *Branta canadensis leucopareia*.  
Laysan duck, *Anas laysanensis*.  
Hawaiian duck (koloa), *Anas wyvilliana*.

Mexican duck, *Anas diazi*.  
Brown pelican, *Pelecanus occidentalis*.  
California condor, *Gymnogyps californianus*.  
Florida everglade kite (snail kite), *Rostrhamus sociabilis plumbeus*.  
Hawaiian hawk (io), *Buteo solitarius*.  
Southern bald eagle, *Haliaeetus leucocephalus leucocephalus*.  
American peregrine falcon, *Falco peregrinus anatum*.  
Arctic peregrine falcon, *Falco peregrinus tundrius*.  
Attwater's greater prairie chicken, *Tympanuchus cupido attwateri*.  
Masked bobwhite, *Colinus virginianus ridgwayi*.  
Whooping crane, *Grus americana*.  
Yuma clapper rail, *Rallus longirostris yumanensis*.  
California clapper rail, *Rallus longirostris obsoletus*.  
Light-footed clapper rail, *Rallus longirostris levipes*.  
Hawaiian gallinule, *Gallinula chloropus sandvicensis*.  
Hawaiian coot, *Fulica americana alai*.  
Eskimow curlew, *Numenius borealis*.  
Hawaiian stilt, *Himantopus himantopus knudseni*.  
Puerto Rican plain pigeon, *Columba inornata wetmorei*.  
Puerto Rican parrot, *Amazona vittata*.  
Ivory-billed woodpecker, *Campephilus principalis*.  
Red-cockaded woodpecker, *Dendrocopos borealis*.  
Hawaiian crow (alala), *Corvus tropicus*.  
Small Kauai thrush (puaiohi), *Phaeornis palmeri*.  
Large Kauai thrush, *Phaeornis obscurus myadestina*.  
Molokai thrush (Olomau), *Phaeornis obscurus rutha*.  
Nihoa millerbird, *Acrocephalus kingi*.  
Kauai oo (oo-aa), *Moho braccatus*.  
Crested honeycreeper (akohekohe), *Palmeria dolei*.  
Hawaii akepa (akepa), *Lozops coccinea coccinea*.  
Maui akepa (akepule), *Lozops coccinea ochracea*.  
Oahu creeper (alauwahio), *Lozops maculata maculata*.  
Molokai creeper (kakawahie), *Lozops maculata flammea*.  
Akiapolaau, *Hemignathus wilsoni*.  
Kauai akialoa, *Hemignathus procerus*.  
Kauai and Maui nukupuu, *Hemignathus lucidus*.  
Laysan and Nihoa finches, *Psittirostra cantans*.  
Oo, *Psittirostra psittacea*.  
Palila, *Psittirostra bailleui*.  
Maui parrotbill, *Pseudonestor xanthophrys*.  
Bachman's warbler, *Vermivora bachmani*.  
Kirtland's warbler, *Dendroica kirtlandii*.  
Dusky seaside sparrow, *Ammospiza nigrescens*.  
Cape Sable sparrow, *Ammospiza mirabilis*.

##### REPTILES AND AMPHIBIANS

American alligator, *Alligator mississippiensis*.  
Blunt-nosed leopard lizard, *Crotaphytus silus*.  
San Francisco garter snake, *Thamnophis sirtalis tetrataenia*.  
Puerto Rican boa, *Epicrates inornatus*.  
Santa Cruz long-toed salamander, *Ambystoma macrodactylum croceum*.  
Texas blind salamander, *Typhlomolge rathbuni*.  
Houston toad, *Bufo houstonensis*.

##### FISHES

Shortnose sturgeon, *Acipenser brevirostrum*.  
Longjaw cisco, *Coregonus alpenae*.  
Lahontan cutthroat trout, *Salmo clarki henshawi*.

Plute cutthroat trout, *Salmo clarki selentis*.

Greenback cutthroat trout, *Salmo clarki stomias*.

Gila trout, *Salmo gilae*.

Arizona (Apache) trout, *Salmo sp.*

Humpback chub, *Gila cypha*.

Mohave chub, *Siphathes mohavensis*.

Pahranagat bonytail, *Gila robusta jordani*.

Moapa dace, *Moapa coriacea*.

Woundfin, *Plagophorus argentissimus*.

Colorado River squawfish, *Ptychocheilus lucius*.

Kendall Warm Springs, dace, *Rhinichthys osculus thermalis*.

Cul-ul, *Chasmistes cujus*.

Devil's Hole pupfish, *Cyprinodon diabolis*.

Comanche Springs pupfish, *Cyprinodon elegans*.

Tecopa pupfish, *Cyprinodon nevadensis calidae*.

Warm Springs pupfish, *Cyprinodon nevadensis pectoralis*.

Owens River pupfish, *Cyprinodon radiosus*.

Pahrump killifish, *Empetrichthys latos*.

Big Bend gambusia, *Gambusia gaigei*.

Clear Creek gambusia, *Gambusia heterochir*.

Pecos gambusia, *Gambusia nobilis*.

Unarmored threespine stickleback, *Gasterosteus aculeatus williamsoni*.

Gila topminnow, *Poeciliopsis occidentalis*.

Fountain darter, *Etheostoma fonticola*.

Watercress darter, *Etheostoma nuchale*.

Maryland darter, *Etheostoma sellare*.

Blue pike, *Stizostedion vitreum glaucum*.

Created in 1849, the Department of the Interior is concerned with the management, conservation, and development of the Nation's water, fish, wildlife, mineral, forest, and park and recreational resources. It also has major responsibilities for Indian and Territorial affairs.

As the Nation's principal conservation agency, the Department works to assure that nonrenewable resources are developed and used wisely, that park recreational resources are conserved for the future, and that renewable resources make their full contribution to the progress, prosperity, and security of the United States—now and in the future.

#### ADDITIONAL SPACE LISTED JUNE 1, 1973

1. Utah prairie dog.
2. Northern Rocky Mountain wolf.
3. Eastern cougar.
4. Mississippi sandhill crane.
5. Puerto Rican whip-poor-will.
6. Santa Barbara song sparrow.
7. Desert slender salamander.
8. Okaloosa darter—a tiny minnow found only in Okaloosa County, Florida.

Mr. STEVENS. Some question has arisen with respect to the status of dall sheep and brown bear, two species found in Alaska. Neither of these species is on the Department of the Interior's list of endangered native fish and wildlife. Nor are there plans to add them at this time. I ask unanimous consent to have printed in the RECORD a letter from the Associate Director of the Bureau of Sport Fisheries and Wildlife to this effect.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

U.S. DEPARTMENT OF THE INTERIOR,  
FISH AND WILDLIFE SERVICE,  
Washington, D.C., June 7, 1973.

Hon. TED STEVENS,  
U.S. Senate,  
Washington, D.C.

DEAR SENATOR STEVENS: This responds to your letter on behalf of Mr. John W. Hendrickson, Esq., regarding dall sheep and brown bear.

Please assure Mr. Hendrickson that neither of these animals are on this Department's

List of Endangered Native Fish and Wildlife and there are no plans to add them to this time.

We hope this information will clarify the matter. If we can assist you further, please call on us.

Sincerely yours,

Associate Director.

Mr. STEVENS. Mr. President, I would like to inquire of the Senator from California if he is prepared at this time to take up an amendment I have concerning undue economic hardship.

Mr. TUNNEY. Mr. President, the Senator from New Jersey has a few comments that he wants to make in debate, if that is agreeable with the Senator from Alaska.

Mr. STEVENS. Mr. President, that is perfectly agreeable with me.

Mr. WILLIAMS. Mr. President, first I want to extend my sincere thanks and appreciation to the Senator from Washington (Mr. MAGNUSON) and to other members of the Senate Commerce Committee for their hard and alert work on this bill and for their dedication to the protection of endangered wildlife.

Mr. President, this is important legislation. It is remarkable when one considers the time in which the committee has been able to deal with this bill after its introduction on the floor, the hearings, and then bringing it to the Senate for consideration by the full Senate.

It was only June 12 of this year that I introduced this bill. It followed the introduction of another bill by the Senator from Washington (Mr. MAGNUSON) in April. The bill that I had introduced had a broader sweep of protection than the Magnuson bill. In my judgment, the best of both bills has been combined in S. 1983, the bill before us today, and I am more than grateful to the committee for their expeditious consideration of this measure.

Mr. President, one of our most precious natural resources is our wildlife. It is difficult to imagine a world without the many and varied creatures which inhabit our forests, rivers, and oceans.

And yet, if our wildlife continues to decline at the alarming rate we have witnessed during the past 100 years or so, it is indeed possible that the time will come when it will be necessary to visit a zoo or wildlife preserve in order to observe what was once an integral part of our everyday environment.

Many species of fish, birds and mammals have disappeared through the evolution process. Many of them were never abundant to begin with and were therefore particularly vulnerable to the encroachment of civilization. However, many species would still be abundant today were it not for overexploitation by man.

It was once necessary for man to hunt wild animals in order to obtain food and clothing. However, in today's industrial society, where there is a synthetic substitute for almost anything nature can provide, we are no longer dependent upon animals, as we once were.

Most animals are worth very little in terms of dollars and cents. However, their esthetic value is great indeed. The pleasure of simply observing them, as

demonstrated by the hundreds of thousands of people who visit zoos and wildlife preserves each year, is unmeasurable. Furthermore, the integral part they play in preserving the delicate balance of nature cannot be ignored.

In the United States alone, over the past 100 years, 47 species of native fish and wildlife have become extinct. We have hunted them and destroyed their habitat. We have been indifferent to their fate and ignored the fact that once an animal has vanished from the Earth, it can never be replaced. Today, we can only hope to prevent more wildlife from becoming extinct.

For quite some time, it has been evident that present laws are inadequate for protecting endangered wildlife.

Neither the Endangered Species Protection Act of 1966, nor the Endangered Species Conservation Act of 1969, prohibits the taking or possession of native, endangered fish and wildlife.

Migratory birds are protected under the Migratory Bird Treaty Act; eagles are protected under the Bald Eagle Act; and marine mammals under the Marine Mammal Protection Act. The Lacey Act provides for Federal involvement if an animal is taken contrary to State law and transported across State lines. And the importation of foreign endangered wildlife is prohibited under the Endangered Species Conservation Act of 1969.

The present endangered species law requires the Secretary of the Interior to maintain two lists of endangered wildlife. One list is composed of the names of native—or domestic—endangered wildlife and the other list is made up of the names of foreign endangered wildlife. This law further requires that a species of wildlife be threatened with extinction before it may be placed on the endangered list. An animal's continued existence must actually be in peril before it may be considered endangered.

It is absolutely essential that a species of wildlife be afforded protection before it reaches the endangered list and thereby the brink of extinction. In addition, a Federal prohibition against the taking, import, export and interstate transportation of any species listed as endangered is mandatory if endangered wildlife is to be saved.

The continued survival of many species now listed as endangered is questionable. Various factors, including small population levels, restricted breeding areas, continued destruction of habitat and inadequate prohibitions against taking are responsible for their precarious existence.

The bill before us today, S. 1983, which I introduced, is designed to provide the protection needed to save species of wildlife threatened with extinction, as well as those species which are likely to become threatened with extinction if protective measures are not taken.

I would like to take a few moments to briefly review the provisions of this legislation.

S. 1983 requires that the Secretary maintain two lists. One list shall contain the names of "endangered" native and foreign wildlife and the other shall contain the names of "threatened" native and foreign wildlife. The endangered list will be composed of those species



which are in danger of extinction. The threatened list will be composed of those species which are not presently in danger of extinction, but which are likely to become endangered if protective measures are not taken. The bill sets up requirements for determining and listing species of fish and wildlife which are endangered or threatened. Further, whenever the Secretary lists a species as threatened, he is required to issue regulations to protect such species.

S. 1983 would prohibit the taking, import, export, and interstate transportation, of any species of wildlife or part thereof which is listed as endangered or threatened. In addition, the Secretary is authorized to extend the protection of the act to any species which so closely resembles in appearance one which has been listed as endangered or threatened that enforcement personnel have difficulty in distinguishing between the listed and nonlisted species.

Jurisdiction over endangered and threatened species of wildlife is divided between the Secretaries of the Department of the Interior and the Department of Commerce.

Most States are intimately involved with endangered wildlife because of the habitat they control, the legal responsibilities they have for resident wildlife, and the skilled professional personnel which they employ. Many States are already conducting programs to identify and collect information about threatened resident wildlife and to design programs for their protection.

In recognition of the fact that the protection and conservation of endangered wildlife requires close cooperation between the Federal and State Governments, S. 1983 establishes mechanisms through which they can work together to protect endangered and threatened wildlife.

S. 1983 directs the Secretary to cooperate to the maximum extent practicable with the States. Financial aid grants to the States are authorized for the purpose of carrying out programs for the protection and management of endangered and threatened species. In order to qualify for this financial assistance, a State program must meet the strict criteria which is set forth in the bill. The Federal share of such a program may not exceed 50 percent of the total estimated costs for a single State.

The act in no way limits the power of any State to enact legislation or regulations more restrictive than the provisions of the act.

Under the provisions of S. 1983, the Secretary may delegate to a State the authority to manage resident endangered and threatened wildlife, if such State submits an acceptable plan for this purpose. Such plan must be submitted to the Secretary within 1 year from the date of enactment and must meet or exceed the requirements set forth in the act for obtaining financial assistance. If the plan is not disapproved by the Secretary, it shall go into effect within the State.

The prohibitions against the taking of endangered and threatened wildlife contained in S. 1983 will not apply within

the 15-month period following the date of enactment, except in those States which have not established an acceptable plan and those which do not prohibit the taking of endangered and threatened wildlife.

Resident endangered and threatened wildlife will be subject to the provisions of S. 1983 in their entirety upon the date of enactment in any State which has not established an acceptable plan.

One of the major causes of the decline in wildlife populations is the destruction of their habitat. The future of many species, including some already listed as endangered, is in jeopardy because of continued threats to their environment.

It is therefore essential that the habitat of endangered or threatened wildlife be protected from further encroachment. S. 1983 gives the Secretary authority to acquire any real property which he determines to be necessary in order to protect and restore an endangered or threatened species. He is authorized to use the land acquisition authorities of the Migratory Bird Conservation Act, the Fish and Wildlife Act of 1956 and the Fish and Wildlife Coordination Act. He is further authorized to use funds authorized and appropriated under the Land and Water Conservation Fund Act, in addition to direct appropriations under S. 1983, for the purpose of acquiring such lands.

In order to facilitate international cooperation in the protection of endangered and threatened wildlife, foreign currencies accruing to the United States in other nations under the Agricultural Trade Development and Assistance Act or any other law, may be used to provide assistance to any foreign country in the development and management of programs which are necessary or useful in the conservation and protection of endangered or threatened wildlife. Further, the Secretary, in cooperation with the Secretary of State, is authorized to encourage foreign countries to establish protective programs and to enter into bilateral or multilateral agreements for the protection of endangered or threatened species, and to encourage citizens of such countries to practice conservation in taking fish or wildlife for importation into the United States.

In February of this year, the United States convened a plenipotentiary conference to bring international protection to wild fauna and flora in danger of extinction due to commerce. Representatives from 80 countries attended this conference. The result was the Convention on International Trade in Endangered Species of Wild Flora and Fauna, which provides for a system of regulation for the purpose of preventing the commercial overexploitation of any species of flora or fauna judged to be endangered or threatened by trade. S. 1983 provides the means with which to carry out the provisions of the convention.

Permits may be issued for the taking of a threatened or endangered species for scientific purposes or the propagation of such species in captivity or in a controlled habitat. But only if such taking will not adversely affect the survival of the wild population.

The provisions of the act do not apply to Alaska natives, who take endangered or threatened species for the purposes of consumption or use in a native community or for the purpose of creating authentic native articles of handicrafts and clothing, provided the taking is not done in a wasteful manner.

In addition, a limited hardship exemption is authorized for persons who have entered into contracts prior to the date a species is listed or proposed to be listed as an endangered or threatened species.

A civil penalty of up to \$10,000 and a criminal penalty of up to \$20,000 and up to 1 year in prison, is provided for under the act.

The act also authorizes the Secretary to pay a reward of up to \$2,500 to persons who furnish information leading to a civil penalty or criminal conviction.

Importers of fish and wildlife will be required to register with the Secretary of the Treasury, to keep records and to provide the Secretary or his representative with access to these records and to their place of business.

Citizen suits are also permitted, subject to certain conditions.

Furthermore, the Secretary of the Smithsonian Institution is directed to review species of plants which are endangered or threatened and methods of providing adequate protection, including legislation. He is directed to report his findings to Congress within 1 year from the date of enactment.

Mr. President, I believe that in S. 1983, we have before us the necessary tools with which to restore our endangered and threatened wildlife. I sincerely hope that my colleagues in the Senate share this view, and that S. 1983 will be approved without delay.

I appreciate the full and comprehensive explanation and review of the provisions of this bill that has been made earlier by the knowledgeable Senator from California (Mr. TUNNEY) and the comanager of the bill, the Senator from Alaska (Mr. STEVENS).

Mr. President, I yield the floor.

Mr. TUNNEY. Mr. President, I suggest the absence of a quorum.

The ACTING PRESIDENT pro tempore. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. STEVENS. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

Mr. STEVENS. Mr. President, I send an amendment to the desk and ask for its immediate consideration.

The ACTING PRESIDENT pro tempore. The amendment will be stated.

The second assistant legislative clerk proceeded to read the amendment.

Mr. STEVENS. Mr. President, I ask unanimous consent that further reading of the amendment be dispensed with.

The ACTING PRESIDENT pro tempore. Without objection it is so ordered. The amendment will be printed in the RECORD.

Mr. STEVENS' amendment is as follows:

On page 53, line 13, through page 54, line 11, strike sub-section 11(b) and insert:



"(b) (1) **HARDSHIP**—The Secretary may except from the application of section 10(a) of this Act any person if the failure to grant such exception will cause undue economic hardship: *Provided*, That such exception shall be granted any non-Native resident of an Alaska Native village unless such resident is found by the Secretary not to be primarily dependent upon the taking of fish and wildlife for consumption or use in a Native community or for creating and selling authentic Native articles of handicrafts. The extent and duration of such exception shall be such as the Secretary deems appropriate: *Provided*, No such exception shall be for a duration of more than one year from the date of publication in the Federal Register of notice of proposed listing of the involved species. No exception shall apply to a quantity of fish or wildlife in excess of that specified by the Secretary. No such exception shall be granted unless such person, except non-Native residents of Alaska Native villages who are primarily dependent upon the taking of fish and wildlife for subsistence purposes, applies to the Secretary in writing and furnishes with such application such information as the Secretary may require to prove hardship. The one year period for those species of fish or wildlife which were listed by the Secretary as endangered prior to the effective date of this Act shall expire in accordance with the terms of Section 3 of the Act of December 5, 1969 (83 Stat. 275). No such exemption may be granted for the importation or exportation of a specimen listed in Appendix I of the Convention which is to be used for primarily commercial purposes.

"(2) As used in this subsection, the term 'undue economic hardship' shall include, but not be limited to:

(A) Substantial economic loss resulting from inability caused by this Act to perform contracts with respect to species of fish and wildlife entered into prior to the date of publication in the Federal Register of a notice of a proposed listing of such species as an endangered or threatened species.

(B) Substantial economic loss to persons who, for the year prior to the listing of a species under this Act derived a substantial portion of their income from the lawful taking of any listed species which taking would be made unlawful under this Act; or

(C) Curtailment of subsistence taking made unlawful under this Act by persons (i) not reasonably able to secure other sources of subsistence; and (ii) dependent to a substantial extent upon hunting and fishing for subsistence; and (iii) who must engage in such curtailed taking for subsistence purposes.

"(3) The Secretary may make further requirements for a showing of undue economic hardship as he deems fit. Exceptions granted under this section may be limited by the Secretary in his discretion as to time, area, or other factor of applicability.

Mr. STEVENS. Mr. President, this is really a noncontroversial amendment, and I am pleased to note that I understand the distinguished Senator from California, the manager of the bill (Mr. TUNNEY) has indicated that he would accept the amendment.

It makes certain changes in the section granting exceptions for undue economic hardship. Because it makes a series of changes throughout that section, I have set forth the entire section as amended in my proposed amendment.

My amendment would require that an exception for undue economic hardship must be granted to all non-Native residents of Alaskan Native villages unless

such residents are found by the Secretary not to be primarily dependent upon the taking of fish and wildlife for consumption or use in a Native community or for creating and selling authentic Native articles of handicrafts. In other words, the presumption is that such persons are to be entitled to such an exception. This exception will apply probably to no more than a dozen Alaskans. These are persons who are not one quarter or more Native by blood but are integral members of the Native communities that take endangered species. Presently the only such species of which I am aware is the bowhead whale. This is taken in approximately seven villages along the northwest coast of Alaska. Thus, very few people will be covered. However, to be fair, I believe that all such persons, because they really are part of the Native communities, must be excepted to the same extent as Alaskan Natives in the same communities. Such non-Natives who depend primarily upon the taking of fish and wildlife for subsistence need not apply in writing for the exception. Others must.

This amendment defines the term "undue economic hardship" to also include three groups of persons.

The first group is those persons who incur substantial economic loss resulting from the inability caused by this act to perform contracts with respect to species of fish and wildlife entered into prior to the date of publication in the Federal Register of a proposed listing of a species.

The second is those who, for the year prior to the listing of a species, have derived a substantial portion of their income from the lawful taking of any listed species and will incur substantial economic loss as the result of such listing.

The third is those who must take endangered species for subsistence and who first, are not reasonably able to secure other sources of subsistence, and second, depend to a substantial extent upon hunting and fishing for subsistence, and third, must engage in such curtailed taking for subsistence purposes.

The Secretary is also, under my amendment, given additional discretion to grant exceptions under such limits as he may determine necessary, if he does not believe blanket exceptions are warranted. Such limits may be as to time, area, or any other factor of applicability.

I ask unanimous consent to have printed in the RECORD a telegram I received from the Alaska Legal Services Attorney for Nome.

There being no objection, the telegram was ordered to be printed in the RECORD, as follows:

NOME, ALASKA, July 19, 1973.

Senator TED STEVENS,  
Washington, D.C.

This is to convey my strong support for your amendments to the endangered species legislation currently before the commerce committee. As an Alaska legal services attorney assigned to the Nome office I travel quite extensively through the villages in northwest Alaska. The impact on the residents of these villages of prohibiting the taking of animals supplying traditional foods would be disastrous. As for nonnatives, I would estimate

there are not more than 10 persons who rely on the taking of animals used in traditional Eskimo food for subsistence. They are hardly a danger to any species.

ROBERT BUNDY,  
Attorney at Law.

Mr. STEVENS. Mr. President, this amendment and the other amendments dealing with Alaska Natives were worked out by my staff and the staff of the Senate Commerce Committee's Environment Subcommittee in coordination with Alaska Legal Services.

I am most pleased to express my appreciation to the staff of the Commerce Committee's Environmental Subcommittee and to the Alaska legal services in regard to this amendment. I believe that it does protect fully the rights of those residents of Alaska Native villages. That is the intent of the amendment, to clarify the congressional intent with regard to that protection.

I am hopeful that the Senator from California may be able to accept the amendment.

Mr. TUNNEY. Mr. President, I understand that this amendment is not intended to create a loophole for those who would exploit their Native village resident status in order to increase their taking of the endangered species or to increase commerce in such endangered species but only in order to meet the bona fide community needs; is that not correct?

Mr. STEVENS. The Senator from California is absolutely correct. They are bona fide residents of Native villages who may not be considered to be Natives, who may be married, for instance, to Native people and who are part of the subsistence economy. This amendment is not intended to give anyone the opportunity to start taking endangered species or any other kind of species by virtue of merely establishing residence in a Native village.

Mr. TUNNEY. We have seen examples of thoughtless commercial taking of endangered species, which only helps to drive endangered species nearer and nearer to extinction. I would expect that no permit would be granted under the provisions of this amendment to further that kind of process. I am sure that the Senator from Alaska would agree that no area of the drafting of this amendment would be utilized in order to permit unwarranted exploitation of endangered species.

Mr. STEVENS. I absolutely concur. The Endangered Species Act of the State of Alaska is specific in that regard already. I am trying to make certain that the Federal law is as specific. We are not trying to open the door to commercial exploitation. We are trying, however, to protect those people who live in a subsistence economy and depend on the animals for food and for their livelihood. It is not intended in any way to encourage or to authorize commercial exploitation by those not so dependent.

Mr. TUNNEY. The Senator from California is aware that certain non-Native Alaska village residents are dependent upon the taking of endangered species. Some of these people have entered into

contracts which may have to be broken due to this act. They would suffer unwarranted economic hardship. As I understand the amendment, its purpose is to provide individuals, particularly those who depend on such taking for subsistence purposes, and may be unaware of the application requirements of the act, with a 1-year period to find other means of support. Is that correct?

Mr. STEVENS. That is correct.

Mr. TUNNEY. With that understanding, I think that the Senator from Alaska has offered an amendment which will strengthen the legislation and will protect certain constituents of the Senator in Alaska, and the committee will accept the amendment.

The PRESIDING OFFICER (Mr. CHILES). Is all time yielded back on the amendment?

Mr. STEVENS. I yield back the remainder of my time.

Mr. TUNNEY. I yield back the remainder of my time.

The PRESIDING OFFICER. All time on the amendment has been yielded back.

The question is on agreeing to the amendment of the Senator from Alaska (Mr. STEVENS).

The amendment was agreed to.

Mr. STEVENS. Mr. President, I move that the vote by which the amendment was agreed to be reconsidered.

Mr. TUNNEY. Mr. President, I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. TUNNEY. Mr. President, I ask for the yeas and nays on final passage.

The yeas and nays were ordered.

Mr. STEVENS. I call up another amendment.

The PRESIDING OFFICER. The clerk will report the amendment.

The second assistant legislative clerk reads as follows:

On page 71, lines 20 through 24, strike the proviso and substitute:

"Provided, That if, within fifteen months of the date of enactment of this Act, the Secretary finds that a state which does not prevent the taking of a species listed by him as endangered does not provide adequate protection for that species, he may by regulation implement the provisions of subsection 10(a) of this Act with respect to that species in that State."

Mr. STEVENS. Mr. President, I ask for the yeas and nays on the amendment.

The yeas and nays were ordered.

Mr. ROBERT C. BYRD. Mr. President, I ask unanimous consent that the vote on the pending amendment occur today at the hour of 2 p.m.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. EASTLAND. Mr. President, I send an amendment to the desk and ask for its immediate consideration.

The PRESIDING OFFICER. The Senator would have to ask unanimous consent for that because there is an amendment already pending.

Mr. EASTLAND. Mr. President, I ask unanimous consent that I may send an amendment to the desk for immediate consideration. The manager of the bill has agreed to accept it.

The PRESIDING OFFICER. Without objection, it is so ordered, and the clerk will state the amendment.

The second assistant legislative clerk reads as follows:

On page 29, line 15, before the period, insert a comma and the following: "other than a species of the order Insectica determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man."

The PRESIDING OFFICER. Who yields time?

Mr. EASTLAND. Mr. President, I yield myself such time as I may desire.

Mr. President, this amendment would except insect pests which the Secretary found presented an overwhelming risk to man from the protection provided by the bill. The Senate recently passed S. 1888 to provide for a program to eradicate the boll weevil and other insect pests of cotton. Millions of dollars are spent every year in trying to protect man from such pests. If these eradication programs should approach success, the bill as reported would require their cessation until the insect had been given an opportunity to regenerate.

Another example is the gypsy moth, which was brought into this country by an individual for scientific purposes and has multiplied and spread across the Northeast and is expanding its range State by State defoliating our forests. I do not believe that it makes any sense to attempt to eradicate and preserve these pests at the same time; and I hope that the committee will see fit to agree to this amendment as a technical correction to the bill.

Mr. TUNNEY. Mr. President, I accept the amendment offered by the Senator from Mississippi, which would permit the Secretary to not list species of the order of insectica determined by the Secretary to constitute a pest whose protection under provisions of this act would present an overwhelming and overriding risk to man.

It is my understanding that this amendment would permit the Secretary to not list an insect upon a finding that the insect presented such an overwhelming risk to man that there was no possible justification for providing protection, but that it would not be used to promote the elimination of species which in only a few numbers might be of value to society. The term "overriding" threat implies an extreme danger which only total destruction would prevent.

Even if the risk is overwhelming that, in and of itself, would not keep the species off the list. The Secretary must also find that the avoidance of that overwhelming risk overrides the need to protect the species. In other words, he has discretion as to whether he chooses to protect the species or humans in the case of an overwhelming risk to man. Without the Eastland amendment, he would not have that discretion and would have to protect the species whenever it became endangered regardless of the very worst consequences for man's health or well-being.

I think that the Senator from Missis-

issippi has a similar understanding of the amendment?

Mr. EASTLAND. That is correct.

Mr. TUNNEY. I am prepared to accept the amendment and yield back the remainder of my time.

Mr. EASTLAND. I yield back the remainder of my time.

The PRESIDING OFFICER. All time on the amendment has been yielded back.

The question is on agreeing to the amendment of the Senator from Mississippi (Mr. EASTLAND).

The amendment was agreed to.

Mr. STEVENS. Mr. President, the pending amendment is my amendment. Is that correct?

The PRESIDING OFFICER. The Senator is correct.

Mr. STEVENS. Mr. President, it is my understanding that the Senator from Utah has an amendment and if it is one that is to be accepted by the manager of the bill, I would have no objection to taking it up at this time.

I suggest the absence of a quorum, and I ask unanimous consent that the time not be charged against my amendment.

The PRESIDING OFFICER. Without objection, it is so ordered.

The clerk will call the roll.

The second assistant legislative clerk proceeded to call the roll.

Mr. STEVENS. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. STEVENS. Mr. President, the amendment I have at the desk is to section 16(d). The present proviso states that the prohibitions against taking under S. 1983 automatically apply in any State which does not prevent the taking of any species listed by the Secretary as an endangered species. These prohibitions against taking apply to all species which have been listed by the Secretaries. The present proviso gives the Secretaries no discretion in the matter. The prohibitions automatically apply.

This amendment, as submitted by me and by the Senators from Montana (Mr. MANSFIELD and Mr. METCALF) and the Senator from Georgia (Mr. TALMADGE) would give the Secretary the discretion he needs to act in this area. This amendment also preserves traditional areas of State sovereignty over resident species.

The amendment provides that if the Secretary with authority over the particular species finds that a particular State does not prevent the taking of a species listed by him as endangered and also does not provide adequate protection for that species, he may in his discretion by regulation implement the provisions of subsection 10(a), the prohibitions against taking.

Certain species, like the American alligator, are listed as endangered presently by the Federal Government. However, they are not endangered in certain States like Louisiana. As a matter of fact, there are enough American alligators in Louisiana to permit the export of a number of animals to other States, for zoos and other purposes.

Certain States do not "prevent the

taking" of particular species, but have enacted other measures to protect them. These include habitat acquisition to protect the areas in which these animals live and forge. Such programs are not taken into account under the present language of this section. Land acquisition and other similar conservation measures actually will do more to protect many species of endangered animals than preventing their taking.

Third, certain States, like Illinois, lists the species protected under their State statutes. The Secretary may, by regulation, list or delist additional species and it will take some time to amend the State law to take care of those circumstances.

If each State law which so lists the species covered does not exactly conform to the Secretary's lists, present prohibitions of the bill, under section 10(a), will automatically become effective.

Unfortunately, in none of these cases is the Secretary given any discretion. He must prohibit the taking of all species covered under the act merely because some of the species are not protected by State statute, although there is every reason to believe that the State would act to protect those species that are found to endangered. They have in the past, and I feel certain they will in the future.

This amendment will give the Secretary the discretion he needs to act in such situations.

I want to emphasize the necessity of keeping the States interested in endangered species. They have almost 6,000 officers who are capable of protecting these species. The Federal Government has only some 200 in the whole United States, and to shift this burden from the States to the Federal Government without giving the Secretary discretion to recognize those States which are in fact taking action to protect endangered species would be unfortunate.

I am pleased that Senator MANSFIELD, METCALF, and TALMADGE have seen fit to join as cosponsors of the amendment.

I hope Senators will read the letter we have placed on their desks before voting on this amendment, because the amendment, I think, is very important to preserve the role of the State fish and game departments who have done an admirable job so far in trying to protect endangered species.

Mr. President, I reserve the remainder of my time.

Mr. TUNNEY. Mr. President, as floor manager for the Endangered Species Protection Act, I am not able to accept the amendment offered by the Senator from Alaska. I recognize full well that the purposes of the Senator are well intended. However, I feel it goes too far.

The Committee on Commerce, which has carefully studied Federal-State relationships in the endangered species protection area, has designed in S. 1983, a legislative scheme which is sufficiently sophisticated, first, to permit the continued management of endangered species by those States with well-developed programs; second, to provide Federal protection to States which do not yet offer such protection; and third, to encourage the development of programs in

those States which do not now actively protect endangered species in a manner that will eventually permit a much reduced Federal commitment to endangered species conservation and management.

If the bill is reported, Federal prohibitions against the taking of endangered species apply upon the date of enactment of this act only in those States which have not adopted similar protective measures. During the 15 months subsequent to the passage of the act any State would otherwise be able to exercise its full powers to manage, protect, conserve, restore, or propagate endangered and threatened species. These powers would include the power to permit the taking of threatened species. Furthermore, during this 15-month period any State might apply to the Secretary for approval of its States endangered species management plan. Any State whose plan was not disapproved by the Secretary within 3 months of submission to the Secretary would have full power to regulate both endangered and threatened species, including the power to regulate the taking of endangered species otherwise regulated under this act. At the end of the 15 months following passage of the act, all of the provisions of this act regarding the management and taking of endangered and threatened species would go into effect in any State which had not applied to the Secretary or whose plan had been disapproved by the Secretary.

Thus, the bill as reported takes care of all the options: first, it provides immediate protection against the taking of endangered species in any State which has not provided for such protection at this time. Second, it allows any State to secure full management powers over endangered species by submitting an adequate management plan to the Secretary for approval. Third, 15 months after the passage of the act, Federal law would go into effect to carry out the purposes of this act in any State that should not have an approved management program.

Not only does the bill, as reported, permit any State which adequately protects endangered species to continue such a protection program; it provides funds to assist the State in its management and conservation activities. Ten million dollars is provided to fund this effort for the first 2 years the act is in effect.

The Senator from Alaska argues that the issue is whether or not we are going to preempt the State judicial power to manage present fish and wildlife. This, however, is not the issue. The issue is whether we are going to provide full protection to those species of fish and wildlife which are imminently in danger of extinction in those States which have not yet deemed fit, on the 200 years of our Nation's existence, to provide full protection to these species.

Presently, 35 States provide protection for endangered species. In most of these States, their laws are as strong as or stronger than the provisions of this bill. In the others there are strong management programs. Only 15 States do not now provide some protection for endangered species.

Under this bill there would be abso-

lutely no Federal intervention in those States which provided full protection for presently endangered species. Those States which do not provide absolute prohibitions against taking endangered species but do provide strong programs approved by the Secretary would be totally free to manage a residential species within 3 months of this act. The rationale behind the proposed amendment is that in an emergency the Secretary can rush in and take care of any endangered species. This bill as reported is predicated on the evidence provided in hearings before the Committee on Commerce in the last 2 years that an emergency already exists. This bill only prevents the capacity of those who would exploit endangered species in those States which have not yet had the time to prepare adequate endangered species programs.

This is a bill to protect endangered species, to provide for their conservation, restoration, and propagation. Some argue that the States should have their chance. I argue that the States have had their chance. Nothing in this bill prevents them from continuing to do the excellent work that most of the States have done in the past.

Some States, such as Alaska, have done an excellent job. I think California has done a good job. But there are States which have not done a good job, and it seems to me we ought to have the ability, immediately upon passage of this bill, to protect endangered species inasmuch as those States themselves have not seen fit to do as good a job as the authors of the bill envision as being necessary to protect endangered species.

Mr. STEVENS. Mr. President, I think the Senator from California states his case very well, but, unfortunately, the bill is drawn on the basis of making the Federal law preemptive. In the event there is a species that is not totally protected, then the Federal law applies to all species.

The effect of the amendment I have offered is that if the Secretary finds within this 15-month period that a State does not prevent the taking of a species listed by him as endangered, does not provide adequate protection for that species, he may by regulation implement subsection 10(a) with respect to the taking of that species. In other words, my amendment is directed to a particular situation.

The present language of section 16(d) makes the provisions of the bill effective on the date of enactment of the bill. It does not prevent the taking of any species listed by the Secretary as an endangered species. I think it is most important to keep in mind again what we are doing. We are saying, in effect, that if Louisiana has a management program which has in fact produced a situation in which alligators can be harvested for cultural, scientific, or other purposes without harming the species in that area, even though the alligator may be listed as an endangered species by the Secretary of the Interior, since they do not prevent the taking of alligators, and in fact are taking them under a very scientific and wise management program, that all of the Louisiana laws would be suspended regard to any

species listed among the 109 in the Federal endangered species list. That to me is foolhardy, to suspend the activities of a very viable and good management program, and one that is farsighted.

All that my amendment would do would be to give the Secretary discretion over that on the basis of the individual species, and not make the law effective on the date of the act as to all species if there is any species that is not protected and on the list of the Secretaries on the date of enactment of the bill.

I think that it would be important to list some of the types of species we are talking about. There has been prepared a list of some 14 particular species.

I ask unanimous consent to have this material printed in the Record at this point if the Senator from California does not object.

Mr. TUNNEY. Mr. President, I do not object.

There being no objection, the material was ordered to be printed in the Record, as follows:

1. Longjaw cisco—distribution of this species is throughout Lakes Michigan and Huron, and a very small population in the small deep hole in Lake Erie that was present as late as 1948. The decline of this species is attributed to sea lamprey predation and intensive commercial fisheries for large ciscos and increased competition from the small bloater and alewife in Lakes Michigan and Huron. The low number in Lake Erie is due to a very limited favorable environment which has become increasingly unfavorable in recent years.

2. Lahontan cutthroat trout—This species is found primarily in California, but there are a few in Nevada. California provides complete protection but Nevada does not. The decline of the species is attributed to damage to spawning beds resulting from forest removal, fires, and over grazing. Also, dams which block spawning runs, pollution, diversion of water for irrigation, hybridization, and competition with rainbow trout and other cutthroats are considered to be other reasons for their demise. This species is found primarily on public lands and has been placed in a special protected category by the Bureau of Land Management. The Bureau of Sport Fisheries and Wildlife is constructing a fish hatchery primarily for rearing this subspecies.

3. Breenback cutthroat trout—this species is found only in Boulder and Larimer Counties, Colorado. The decline of this species was caused by deterioration of habitat due to man's activities, competition from stocked trout, and hybridization. Although my information does not show that this species is fully protected by the State of Colorado, the wildlife agency is cooperating in reclamation and restocking of certain waters in the Rocky Mountain National Park and stocking is proposed in other limited reclaimed suitable waters. Barrier dams to isolate populations and angling restrictions are also proposed for certain streams.

4. Arizona trout—the Arizona Game and Fish Department has stocked several streams in Arizona with this species. They have closed Ford Creek and the Upper East Fork of the White River to fishing. Barrier dams to protect the species were constructed on both streams in cooperation with the department, and, the White Mountain Apache tribe constructed two lakes for this trout. Plans are underway to increase hatchery production of this species and restock suitable reclaimed waters. The Arizona Game and Fish Department has several thousand of these fish producing at one of its state hatcheries.

5. Pahranaagat bonytail—this species is found only at the outflow of two springs in Lincoln County, Nevada. Its decline is attributed to irrigation development and establishment of competitive and predatory exotic species in its range. Measures have been proposed to transplant the species into other suitable habitat, if it can be found.

6. Woundfin—this species is found essentially in the Virgin River below Hurricane, Utah. Its decline is attributed to modification of its habitat by man. The species is adapted to life in sandy, swift, turbid rivers. A dam is proposed above St. George, Utah, which purportedly would render this species extinct. Research has been proposed to determine its habitat requirement so as to establish a population elsewhere.

7. Colorado squawfish—this species occurs only in the middle and lower Green River, the main Colorado River above Lake Powell, and the Salt River. The reason for its decline is attributed to the modification of its habitat by man through construction of large reservoirs. The species will not reproduce in cold tailwaters below high dams nor in reservoirs behind these dams.

8. Warm spring pupfish—this species is found in School Spring and Scruggs Springs in the northern part of Ash Meadows, Nye, Nevada. Although not fully protected by state law, School Springs, which is administered by the Bureau of Land Management, was improved and fenced in 1969. In 1970 a well was drilled to serve as an additional water supply during periods of low spring waterflow to protect the species. This pupfish, of course, is found primarily on public land.

9. American alligator—The American alligator is completely protected in all states. However, due to increased populations and impending habitat destruction, the Louisiana Wildlife and Fisheries Commission lifted the total protection last year and conducted a closely regulated harvest in one parish of the state. This species, with its tremendous reproductive potential, and with strict law enforcement given by southern state wildlife agencies, has rebounded tremendously in recent years. It is very doubtful if it will remain on the endangered species list very long.

10. Puerto Rican boa—this species, found only in Puerto Rico, is in trouble mainly from mongoose predation, according to authorities. This theory has been disputed, however, by some observers. People usually kill every one they see and automobiles kill a few every year.

11. Aleutian Canada Goose—this species does not receive total state or federal protection. It is managed by the federal government, not the state, under the Migratory Bird Treaty Act. Hunting is still permitted by the Bureau of Sport Fisheries and Wildlife.

12. Mexican duck—likewise, this species comes under the purview of the federal government. It is not totally protected, hunting is still allowed by the Bureau of Sport Fisheries and Wildlife.

13. Eastern timber wolf—this species is totally protected in every state except Minnesota. The State of Minnesota came up with a state plan to protect and manage this species last year but violent objection from the Bureau of Sport Fisheries and Wildlife resulted in the state legislature rejecting the proposal. Hopefully this program will be accepted by the next state legislature. At present nearly 2 million acres of the Superior National Forest provides complete protection for the species.

14. Red wolf—the red wolf is found in Texas and Louisiana. Texas recently passed an endangered species law which affords complete protection to the red wolf in that state. In Louisiana the red wolf is given complete protection except in cases of live-

stock predation which is controlled by federal agents. The livestock-killing animals are removed alive and transferred to the Wild Animal Propagation Trust of the American Association of Zoological Parks and Aquariums.

Those animals listed above are the only ones on the U.S. native endangered species list not receiving complete protection by state law, to the best of my knowledge. As you can see two of the species are under federal control, not state. Also, many of the species do receive protection in some form or another either from the state or some federal agency when they are found on public lands. Therefore, I cannot foresee where any animal on the endangered species list would suffer as a result of an interim period provided in the new endangered species act to give state agencies an opportunity to beef up their programs in compliance with that act.

Mr. STEVENS. I am not trying to undermine the bill. My State supports the bill, and I think that we have been the leaders in this endeavor. My Governor has indicated that he thinks it is a good idea. However, we want to maintain our ability to act with regard to all species, even though it might be that one species is listed.

I hope that the Senator from California will see my point, that if one species or more is listed and is endangered in Pennsylvania, but is not endangered in Alaska, having it on that list, as the bill stands now, would not only lift it with regard to one State, but would lift it entirely.

Mr. TUNNEY. Mr. President, all that the State of Alaska would have to do would be to apply to the Secretary for approval of this plan.

Mr. STEVENS. But what that would require would be calling a special session of the State legislature. We protect them by State statute. And we must be given the time to call the legislature into session to pass a law on the subject. That is the reason for the 15 months delay.

My friend, the Senator from California, will recall that we put in the 15 months as a sort of breathing period to permit the States which do not protect the taking of any species to have time to act.

We can turn that around and say that the burden is on the Secretary, and if he finds that they are not protected, he may suspend the State law as to that species.

I think that is fair. I think the burden is where it should be. After all, we are dealing with 109 species on the list now. And a lot of people are thinking that we want to take a species that is in danger. They do not understand the fact that Louisiana can have alligators literally, as the old saying goes, coming out of the swamps, whereas they are endangered in some other States.

Mr. TUNNEY. The State of Louisiana could apply for approval of the plan. And if they had an excess number of alligators and they felt that a reasonable harvest of alligators made sense in the State of Louisiana, the Secretary of the Interior might agree.

Mr. STEVENS. In the meantime, all of the plans would be suspended. The State law would become inoperative. They are listed and, therefore, no man-

agement could be undertaken as far as the harvesting of any species during that period of time. And the State has to wait and ask the Secretary of the Interior for approval of a plan which is already effective.

Mr. TUNNEY. In the case of Louisiana, it is the understanding of the Senator from California that if the State of Louisiana made application, they would have immediate approval of the plan as it relates particularly to alligators. They would then be under State management, and there would be no problem.

What specific species in Alaska is the Senator from Alaska talking about in terms of their being affected?

Mr. STEVENS. I would inform the Senator from California that to my knowledge there is no species in Alaska that are endangered that are not already protected by the State plan.

I am not talking about Alaska. I am talking about the general proposition of protecting them where they are endangered. Again, in the Lake Superior wilderness area, we have an area which protects wolves, even though they may not be fully protected by the State law. They are provided a habitat, which is absolute protection. It would be immaterial as to whether the State law protected them, because the only place in which they are found is in a sanctuary.

Any Secretary of the Interior under my amendment, if he lists wolves, would look to that area and say that those wolves do not have to be listed under State endangered species law, because the State already has, as a practical matter, imposed absolute protection for that species. Under present language of the bill, because they are in fact listed on the Federal endangered species list for the whole Nation, they would be taken out of State jurisdiction in this regard.

Mr. TUNNEY. Unless the State came in and asked for approval of that management plan. In the case of Alaska, the management plan would be approved immediately. It is an excellent plan. We are not talking about States such as Alaska which have excellent management plans. However, we are talking about States which do not have plans or which have inadequate management plans. We did not want to wait 15 months to have the kind of controls that were deemed necessary.

It was the view of the committee that if there is a clear and present danger to the endangered or threatened species, then we wanted to have action to protect those species as of the date of the enactment of the law.

I think it is very important that we take such action immediately. It does not make sense, at least to me, to say that we are going to wait for another period of time when we already recognize that the danger is present and with us and that some species are threatened with extinction.

Mr. STEVENS. Mr. President, I think the Senator from California states his position well. I have no great disagreement with him the way it is stated.

The only problem is that the burden is placed on the wrong foot. The burden is

placed on those people who have a good program—a program that is effective—to come forward and ask the Secretary to approve their program. However, my amendment puts the burden on the Secretary to go to those who do not have an effective program and suspend their authority as to particular species.

As the Senator points out, some 30 States do already have programs.

A relatively small number of States do not have the program. However, it would be very simple for the Secretary to go to these States and say, "You are not protecting the species that are listed." They would then be suspended and they would have the burden of coming back and asking for approval.

However, under the Senator's amendment, the 30 States that do have programs are all suspended if any of them contain any species listed on the Federal endangered species list on the date of the enactment of this act.

In the outline which I had printed in the Record, one of the species, as I recall, is a small fish that is found only in Hot Springs. If that fish is not listed on the endangered species program in that State, the entire management program is suspended until the State comes in and asks for restoration.

That is wrong. If the State does not list that species, and the Secretary wants to have it listed, he can do so immediately under my amendment. There is no time frame involved. He can issue the regulations to protect them immediately.

I am sure that if my amendment is in the bill at the time the bill goes to the House and the bill is signed by the President, the Secretary will have the regulations ready to protect those species that are not protected now.

But I believe we have an honest difference of opinion. I want to be subjective, to put the burden on the Secretary to look after those States which do not have effective regulation. I believe the Senator from California is defending the committee's bill, which puts the burden on those States which do have effective regulation to come in and prove it. That to me is the wrong way to approach the bill, and I disagree very honestly and openly with the Senator from California, as I have throughout the consideration of this measure.

Therefore, I would like to change that proviso.

Mr. TUNNEY. Mr. President, I would just like to say there is no Senator who has made a greater contribution to the development of this legislation than the Senator from Alaska.

The PRESIDING OFFICER. All time of the Senator from California has expired. The Senator from Alaska has 8 minutes remaining.

Mr. STEVENS. I yield such time as the Senator from California may desire.

Mr. TUNNEY. I thank the Senator. As I say, there is no Senator who has made a greater contribution to the development of this legislation than the Senator from Alaska. So I certainly do not want my remarks to be in any way construed that I think the Senator from Alaska is trying to open up an evasive loophole in this legislation, because I do not think

that is the case. His persistent interest in seeing this legislation passed shows that he is devoted to the concept of protecting endangered species. I know this full well, and I would say that he has made a tremendous contribution, not only in the committee but on the floor, in explaining what the purposes of this act are.

I must say that I do disagree on this particular point. I think that we do have a clear and present danger to endangered species now, and I think that the Federal Government ought to, at the time that this bill passes, provide protection to endangered species, and the States ought to come in and have their plans approved if they are not now providing adequate protection. In the case of Alaska, it would be approved forthwith, and with many other States the case would be the same. As things now stand, many States already provide the protection required under the act.

The Senator mentioned the State of Louisiana and the alligators, and the fact that at one point alligators were threatened in Louisiana, but through a good management program the State of Louisiana has been able to see propagation of alligators to the point that a reasonable harvest is deemed desirable.

There is nothing in the legislation as presently drafted and as reported by the committee to prevent the Secretary from granting a permit to take a reasonable number of alligators, even if the State plan for the management of endangered species in Louisiana was disapproved by the Secretary. I do not know whether the State plan would be disapproved or approved, but even if it were disapproved, and that meant that the Federal regulations would be operative, it would not prevent the Secretary from granting a specific permit to the State to allow a reasonable number of alligators to be taken.

So I recognize that there is a disagreement. I recognize that there is a difference of philosophy. I just happen to think that we have such a need for the management at the Federal level of endangered species that we ought to have the act become operative across the board at the time of passage, and if States are now handling the problem better than the Federal Government, the Federal Government would not be involved in their affairs.

Mr. STEVENS. Mr. President, I thank the Senator from California for his kind remarks. I believe we have, as I stated, an honest difference of opinion on the approach to be taken with regard to alligators. They are listed among the 109 that are already endangered species, notwithstanding the fact that, as I say, in Louisiana they have a good management program and they are not endangered there. The effect of the committee bill would be to suspend the Louisiana program until the State of Louisiana came forward and demonstrated that it was in fact a good program. The fact that there is a surplus of alligators there demonstrates that they have a good program, in my opinion.

I would say to the Senator from California that when I conducted the hear-



ings on this matter, I asked the representatives of the National Association of State Game & Fish Commissioners, the Wilderness Society, the Friends of Earth, and the others with regard to this preemption, did they not feel that the States should have a time period to act before the Federal Government should move. My understanding of their response was that they all believed that the State should be given a reasonable time. That is the reason for the 15-month time period that is in the bill, which is reasonable as far as the committee is concerned. The Secretary should act on an emergency basis to protect individual species that are in need of protection during that period.

That is my understanding of the general tenor of the witnesses' comments, and I believe this amendment would carry out that objective, which I outlined to the witnesses as they appeared before the committee.

Mr. President, I assume that the time is expired.

The PRESIDING OFFICER (Mr. CHILES). All time on the amendment has expired. Time can be yielded on the bill itself.

Mr. TUNNEY. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. TUNNEY. Is there anything in the rules to prevent another amendment from being offered between now and 2 o'clock, the time that was designated for the yea-and-nay vote on the Stevens amendment?

The PRESIDING OFFICER. The time on the Stevens amendment having expired, another amendment is in order.

Mr. MOSS. Mr. President, I send to the desk a series of amendments, which I call up, and ask unanimous consent that they be considered en bloc.

The PRESIDING OFFICER. Without objection, the amendments will be considered en bloc.

The amendments will be stated.

The legislative clerk proceeded to read the amendments.

Mr. MOSS. Mr. President, since they are rather lengthy and complicated, I ask unanimous consent that further reading of the amendments be dispensed with, and I shall try to explain what the purpose of the amendments is. I have discussed them fully with the manager of the bill.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. Moss' amendments, en bloc, are as follows:

Page 29, line 9, insert "(1) 'Conservation' and 'management' mean the collection and application of biological information for the purposes of increasing and maintaining the number of animals within species and populations of endangered and threatened species at the optimum carrying capacity of their habitat. Such terms include the entire scope of activities that constitute a modern scientific resources program, including, but not limited to, research census, law enforcement, and habitat acquisition and improvement. Also included within these terms, when and where appropriate, is the protection, propagation, conservation and restoration of such species, including regulation and taking necessary to these ends.

Page 30, line 16, insert "(7) 'Optimum carrying capacity' means the ability of a given habitat to support the optimum sustainable population of an endangered or threatened species in a healthy state without diminishing the ability of the habitat to continue that function."

Page 30, line 16, and immediately following (7) above, insert "(8) 'Optimum sustainable population' means, with respect to any population segment to endangered or threatened species, the number of such species which will result in the maximum productivity of the species, keeping in mind the optimum carrying capacity of the habitat and the health of the ecosystem of which they form a constituent part."

Pages 29, 30, 31 and 32, renumber the present paragraphs (1), (2), (3), (4) and (5) as (2), (3), (4), (5) and (6) and renumber the present paragraphs (6), (7), (8), (9), (10), (11), (12), (13) and (14) as (9), (10), (11), (12), (13), (14), (15), (16) and (17).

Page 36, lines 14 and 15, strike the words "protection, restoration or propagation" and insert the words "and management."

Page 38, lines 2 and 3, strike the words "protection, restoration, or propagation" and insert the words "and management."

Page 38, lines 11 and 12, strike the words "management, conservation, protection, and restoration" and insert the words "conservation and management."

Page 39, lines 12 and 13, strike the words "conservation, protection restoration, and propagation" and insert the words "conservation and management."

Page 39, lines 21 and 22, strike the words "conservation, protection, restoration and propagation" and insert the words "conservation and management."

Page 40, lines 7, 8 and 9, strike the words "research, censusing, law enforcement, propagation and habitat acquisition or improvement," and insert the words "conservation and management."

Page 72, line 4, strike the words "management and taking" and insert the words "conservation and management."

Mr. MOSS. Mr. President, these amendments that I have proposed are simply to establish in this bill a definition or definitions that are consistent generally with the language that was worked out in the sea mammal bill that the Senator from South Carolina (Mr. HOLLINGS) worked on so vigorously, and that also came out of our Commerce Committee.

What we are trying to do here, and what this amendment will accomplish, is to define conservation and management in a way that is agreeable to and supported by the wildlife community. It reinforces Congress' determination, as expressed in the Marine Mammal Protection Act, that our invaluable and irreplaceable wildlife resources be handled on a professional and not simply an emotional basis.

The amendments would, first of all, insert a new paragraph 1 at page 29, line 9, to provide that conservation and management mean the collection and application of biological information for the purposes of increasing and maintaining the number of animals within species and populations in endangered and threatened species at the optimum carrying capacity of their habitat.

Such terms include the entire scope of activities that constitute a modern scientific resources program, including but not limited to research, census, law enforcement, and habitat acquisition and

improvement. Also included within these terms, when and where appropriate, is the protection, propagation, conservation, and restoration of such species, including regulation and taking necessary to these ends.

The thrust of these amendments is that the States, in managing resident wildlife, are authorized to maximize the population. It is not simply to keep endangered species at a good level, but really to improve and expand the species, and that whatever scientific methods are needed in order to bring the population up to the maximum carrying capacity of the habitat shall be done, and this includes all of the specific functions. Also, in the amendments, we define "optimum carrying capacity" and "optimum sustainable population" and what those terms mean. Then, with those definitions engrafted in there, there is a renumbering of the paragraphs in order to make them fit in their regular order in there. That is what constitutes the second page of the amendment.

We consistently use the words "conservation and management" rather than repeating all the other terms, because they all refer back to the first paragraph on conservation and management.

In our consideration of the bill, we thought it would be entirely proper to write this language in a concise and logical manner, and to emphasize the fact that the purpose of this is not simply to protect the resident species which are threatened or endangered, but simply to provide that there be a maximum effort made to restore the numbers of those species to the point that they would not any longer be considered threatened or in any way endangered.

We believe that this language will accomplish that.

I have discussed this, as I say, at some length with the manager of the bill. I compliment him very highly for his dedication to the work he has done on this matter and for his great concern for the problems we face.

As our country has become more populated and metropolitan in nature, of course, we put pressure on the various species of wildlife. The time is here when we must make a determined effort to see that we do not drive to extinction any of the wildlife that can be preserved.

I think that is the objective of all of us who have been concerned with this bill.

I especially compliment the Senator from California for the valuable work he has done on this matter.

Mr. TUNNEY. Mr. President, I want to thank the distinguished Senator from Utah for his very kind remarks. It is clear that the language which is suggested by the Senator from Utah would strengthen the purposes of this act, which is, namely, to protect, conserve, propagate and restore endangered species. I have had the opportunity to consult with the Senator from Utah, as he has indicated, regarding the language, and I think that my understanding of it is similar to his; that is, that the amendment is designed in a more careful fashion to articulate the type of protections the committee intended when it reported



the bill from the committee to the floor of the Senate.

Mr. MOSS. I thank the Senator from California for his remarks. I believe that we see eye to eye on the matter. It will strengthen the bill considerably as these definition amendments are adopted.

Mr. TUNNEY. One further point. It is the understanding of the Senator from Utah, is it not, that in no way by this amendment are we going to be moving the direction of treating endangered species as game animals?

Mr. MOSS. No. It does not affect that at all. It does not change the characterization of any animal into a game or a nongame kind of animal. But many of those on the endangered or the threatened species list do fall into the game classification.

Mr. TUNNEY. If they do fall into the game classification the protection afforded them under this bill, will in no way be diminished by the language which is the clarifying language suggested by the Senator from Utah?

Mr. MOSS. Yes. That is true. It applies to all animals of resident species. In fact, beyond even the animal class.

Mr. TUNNEY. It would not change the protection given to endangered species.

Mr. MOSS. No, it would not change that.

I want to compliment the Senator from Utah for the great interest he has shown in the bill. As a member of the committee, he has taken a very deep interest in the matter and has helped to fashion the bill which has come to the floor of the Senate today.

With the understandings that I now have, and as expressed by the Senator from Utah, I am prepared to accept the amendment and yield back the remainder of my time.

Mr. MOSS. Mr. President, I yield back the remainder of my time.

The PRESIDING OFFICER (Mr. HASKELL). All time on the amendment has now expired.

The question is on agreeing to the amendment of the Senator from Utah (Mr. Moss).

The amendment was agreed to.

Mr. MOSS. Mr. President, I move that the vote by which the amendment was agreed to be reconsidered.

Mr. TUNNEY. Mr. President, I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. TUNNEY. Mr. President, I send to the desk a series of technical and clarifying amendments to S. 1973 and ask unanimous consent that they be considered en bloc.

The PRESIDING OFFICER. The amendments will be stated.

The legislative clerk proceeded to read the amendments.

Mr. TUNNEY. Mr. President, I ask unanimous consent that further reading of the amendments be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered, and the amendments will be printed in the RECORD.

The text of the amendments is as follows:

On page 27, line 12, before the word "educational," insert the words "aesthetic, ecological,".

On page 28, line 8, after the word "States" insert the words "and other interested parties,".

On page 31, line 6, delete the word "terrestrial".

On page 31, line 20, after the word "harass," and before the word "pursue", insert the word "harm,".

On page 33, delete lines 17-23.

On page 33, line 34, delete the number "3" and insert the number "2".

On page 35, line 9, delete the word "Secretary" and insert the word "Secretaries".

On page 36, lines 15-16, strike the words "endangered or".

On page 38, line 12, before the word "and" insert the word "propagation".

On page 38, line 18, after the word "has", insert the words "statutory and regulatory".

On page 39, line 13, strike the words "facing extinction" and, before the word "fish" strike the words "endangered and threatened".

On page 40, strike lines 13-17 and insert, in lieu thereof, the following:

"(B) the readiness of a State to proceed with a conservation and management program consistent with the objectives and purposes of this Act;

"(C) the number of endangered and threatened species within a State;

"(D) the potential for restoring endangered and threatened species within a State; and

"(E) the relative urgency to initiate a program to restore and protect an endangered or threatened species in terms of the survival of the species."

On page 40, line 19, after the word "year" insert the word "shall".

On page 40, line 20, after the period insert the words "Any funds remaining unobligated or unexpended at the close of the second fiscal year shall remain available to the Secretary for the purpose of this section."

On page 41, line 18, after the period, insert the words "For the purposes of this section, the non-federal share may, in the discretion of the Secretary, be in the form of real or personal property, the value of which will be determined by the Secretary, as well as money."

On page 41, line 23, after the word "appropriated" insert the words "through the fiscal year ending June 30, 1977."

On page 42, line 12, strike the word "of" and insert in lieu thereof the word "regarding".

On page 49, lines 19 and 20, delete the words "subsection (a)" and insert the words "paragraph (1) of this subsection".

On page 50, lines 20-22, strike the words "specimens or products processed or manufactured in whole or in part from specimens of any such species" and insert, in lieu thereof the words "any endangered species of fish or wildlife".

On page 51, lines 12-14, after the word "consumption" strike the words, "or taken for recreational purpose in waters under United States jurisdiction or on the high seas," and insert in lieu thereof the words "or fish or wildlife taken for recreational purposes pursuant to applicable Federal or State laws and regulations in waters under United States jurisdiction or on the high seas".

On page 55, line 16, after the word "consumption" insert the words "within native villages or towns".

On page 59, line 14, after the word "revocation," insert the words "made pursuant to this section".

On page 68, line 11, strike the word "protection", and insert in lieu thereof the word "conservation".

On page 69, line 20, add a new subsection as follows:

"(f) Section 2(l) of the Federal Environmental Pesticide Control Act of 1972 (P. L. 92-516) is amended by striking out the words 'by the Secretary of the Interior under Public Law 91-135' and inserting in lieu thereof

the words 'or threatened by the Secretary pursuant to the Endangered Species Act of 1973'."

The PRESIDING OFFICER. Without objection, the amendments will be considered en bloc.

Mr. TUNNEY. Mr. President, I have submitted these technical and clarifying amendments to the Senator from Alaska (Mr. STEVENS) and he has indicated that he will support them. The amendments will help to achieve the purposes of the bill and will clarify some confusion caused by language remaining in the bill from earlier drafts or omitted from earlier drafts which went unnoticed during the final committee markup.

They are, as I indicate, technical in nature. They are important, however.

If there is a member of the minority on the floor now, I should like to move their adoption.

Mr. President, I ask unanimous consent that I may suggest the absence of a quorum, with the time to be charged against both sides.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. TUNNEY. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. NELSON. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. NELSON. Mr. President, I ask unanimous consent that William Spring and Richard Johnson, staff members of the Subcommittee on Manpower and Poverty, be permitted access to the floor during the course of the consideration of the manpower bill this afternoon, beginning at this time.

The PRESIDING OFFICER. Without objection, it is so ordered.

Who yields time?

Mr. TUNNEY. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. NELSON. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. NELSON. Mr. President, I ask unanimous consent that Mr. John Scales minority counsel of the Manpower and Poverty Subcommittee, be permitted the privilege of the floor during the debate on this measure.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. ROBERT C. BYRD. Mr. President, I suggest the absence of a quorum. I ask unanimous consent that the time not be charged against either side.

The PRESIDING OFFICER. Without objection, it is so ordered.

The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. TUNNEY. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. TUNNEY. Mr. President, as I understand it, the parliamentary situation is that I have an amendment pending. I have not yet yielded back the remainder of my time.

The PRESIDING OFFICER. The Senator is correct.

Mr. TUNNEY. I am prepared to yield back the remainder of my time. Is the designee of the minority leader prepared to yield back the remainder of his time?

Mr. COOK. Mr. President, I yield back the remainder of my time.

The PRESIDING OFFICER. The question is on agreeing to the amendment. The amendment was agreed to.

Mr. TUNNEY. Mr. President, I move to reconsider the vote by which the amendment was agreed to.

Mr. COOK. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. TUNNEY. Mr. President, I send an amendment to the desk.

The PRESIDING OFFICER. The amendment will be stated.

The legislative clerk proceeded to read the amendment.

Mr. TUNNEY. Mr. President, I ask unanimous consent that further reading of the amendment be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered; and, without objection, the amendment will be printed in the RECORD.

The amendment is as follows:

On page 53, line 8, strike the word "for."  
On page 53, line 8, before the word "scientific" insert the word "for".

On page 53, at line 11-12, strike the words "the propagation of such species in captivity or in a controlled habitat", and insert the following "(2) to enhance the propagation or survival of the affected species including the propagation of such species in captivity or in a controlled habitat."

Mr. TUNNEY. Mr. President, the purpose of the amendment I am offering is to allow the Secretary to permit the taking of an endangered species for the enhancement of the species. This is a needed management tool recommended by all wildlife biologists. It is needed, for example, where a species is destroying its habitat or where the species is diseased.

This amendment has been discussed with the Senator from Alaska, who has indicated that he approves of it.

I am prepared to yield back the remainder of my time, if the distinguished Senator from Kentucky, the designee of the minority leader, is prepared to yield back the remainder of his time.

Mr. COOK. I yield back the remainder of my time.

The PRESIDING OFFICER. The question is on agreeing to the amendment. The amendment was agreed to.

Mr. TUNNEY. Mr. President, I move to reconsider the vote by which the amendment was agreed to.

Mr. COOK. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

The PRESIDING OFFICER. The bill is open to further amendment.

Mr. TUNNEY. Mr. President, I send an amendment to the desk.

The PRESIDING OFFICER. The amendment will be stated.

The legislative clerk proceeded to read the amendment.

Mr. TUNNEY. Mr. President, I ask unanimous consent that further reading of the amendment be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered; and, without objection, the amendment will be printed in the RECORD.

The amendment is as follows:

On page 52, between lines 22 and 23, insert a new subsection as follows:

"(c) SPECIES HELD IN CAPTIVITY OR CONTROLLED ENVIRONMENT.—The provisions of this section shall not apply to any species held in captivity or in a controlled environment on the effective date of this Act if the purposes of such holding are not contrary to the purposes of this Act."

Mr. TUNNEY. Mr. President, I submit an amendment to S. 1983 to exempt from the prohibitions of this bill present owners of certain endangered species.

This amendment would exempt from Government interference endangered species now lawfully held in captivity or in a controlled environment which might come under provisions of this bill. These animals include pets, species held for obligation purposes for which permits might otherwise have to be secured under this bill, and species held in similar circumstances. The Government has made several attempts in the recent past to prosecute certain individuals attempting to enhance the condition of endangered species for seemingly technical violations of the law.

Without further judging this particular case, I wish to submit for the RECORD a newspaper article from the Denver Post illustrating the type of individual effort which can be made to help restore endangered species and the possible governmental interference which might be exacerbated if we did not provide the grandfather clause which is contained in my proposed amendment. I ask unanimous consent that this article be printed at this point in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From the Denver Post, Apr. 22, 1973]

#### HOW REDTAPE IS STRANGLING AN ENDANGERED SPECIES

(By Zeke Scher)

Colorado's Division of Wildlife has authorized 126 men and women to keep those majestic falcons and hawks generally called raptors. They spend many hours in training and hunting with the raptors, the world's fastest birds.

But not all licensed falconers have birds and some who do choose not to fly them and risk losing them, for raptor populations have plummeted and most of these birds of prey are on the endangered list.

The law limits a falconer to two birds. This possession limitation doesn't apply to "approved" scientific or education institutions (the Air Force Academy has nine), or to those engaged in an "approved" raptor breeding program. Seventy-six of the 189 birds in captivity in the state are held for breeding by 10 parties.

Lt. Col. Richard Allen Graham, 39, is one of them. He is in charge of the T-33 jet training program at Peterson Field in Col-

orado Springs. In August 1969, he returned to the United States after 250 fighter missions in Vietnam. He lives on the eastern edge of Colorado Springs in a modest ranch-style house with a spacious backyard, where he keeps the birds, and an unobstructed view of Pikes Peak.

Graham has worked with birds since he was 7 years old in his native Brownsville, Tex. In 1965 when the Air Force Academy wanted a rare white Arctic gyrfalcon, Graham took leave from his base in Germany and trapped one in Canada's Northwest Territories. The bird, named Baffin, became the Academy's official mascot.

When the Danish government last year approved a survey of Greenland's falcon population, Graham was named co-leader of the expedition. He is also director of the budding United Peregrine Society Inc., which seeks to save the endangered falcons by breeding them in captivity.

Graham has 17 falcons in the mews (the raptor pens) in his back yard. Fourteen are peregrine falcons, among the rarest of all raptors. There are only 50 in Colorado. Graham may hold more peregrines than anyone in the nation.

But:

The Colorado Wildlife Division won't renew his license as a falconer and won't "approve" his breeding program.

The U.S. Bureau of Sport Fisheries and Wildlife (BSF&W) is prosecuting him on three charges and is attempting to confiscate 10 of his birds.

The U.S. Customs Service has levied a \$7,500 assessment on him for the same 10 birds the other government agency is trying to seize.

And a federal lawyer has threatened him with criminal prosecution if he crosses a state line with one of his falcons.

That's the "bad" news.

Now the "good" news:

Even those who are trying to block his breeding program concede that Graham is an experienced falconer totally dedicated to saving the birds.

He has served 21 years in the Air Force with distinction, winning the Distinguished Flying Cross and 13 Air Medals.

Educators, congressmen, lawyers and many falconers and friends are supporting his fight to continue his program of captive breeding.

What's the fuss all about?

Gross harassment, according to Graham, instigated by bureaucrats more concerned with prosecuting him than with saving an endangered species.

But government agencies say the issue is violation of regulations.

Their confrontation surfaced in four quick-breaking developments in February, and a climax is approaching. But let's start back at the beginning.

As a child in southern Texas Graham required no special lessons on law and order. His father was district attorney, his uncle was county judge and lots of other relatives were lawyers. A brother who is an attorney helped incorporate the United Peregrine Society.

Graham probably would have become a lawyer, too, but for his enlistment at 18 as an airman in August 1952 at Corpus Christi, Tex. The toughest thing about his first two years in the Air Force training was he had to do without his pet birds. When other kids were shooting hawks, Graham had been patching them up. He was seldom without a raptor.

You can take Lorinda Graham's word for that. A native of Sheridan, Wyo., she met Richard—and his redtail hawk—at McChord Air Force Base near Tacoma, Wash., in 1956.

They were married two years later. Luggage in the travels of the service family always included a hawk or falcon—to Alaska, Maine, Texas, Arizona, Germany and finally Colorado.

In the mid-'60s, Graham underwent a change in raptor philosophy. The sport of falconry—using raptors to hunt game—seemed an indulgence at a time when the world's falcons faced extinction.

Agricultural pesticides had gone up the food chain—insects to small birds to raptors—to the point where falcons were dangerously threatened. They couldn't utilize the calcium needed to form egg shells strong enough to withstand incubation.

Graham's love for the birds dictated he do something to save the species. He felt that in the not-too-distant future the problem of agricultural poisons would be whipped. But in the critical period of perhaps 10 to 20 years, the raptors might not survive in the wild. His solution: Breeding North American peregrine falcons in captivity for eventual reintroduction into the wild.

This plan would entail capture of comparatively few birds and a large-scale research program to maintain the genetic continuity of the species, which would be fed poison-free food.

The food, large housing facilities and the unusual amount of time required in handling falcons—to keep them tame and healthy—meant considerable expense. Graham helped create the United Peregrine Society as the non-profit vehicle to support the plan.

A week after his arrival in Colorado Springs in late summer of 1969, Graham informed state officials in Denver that he had more than the two birds allowed—three Spanish peregrines and a gyrfalcon—and that he expected to obtain more for his breeding program.

Colorado Game Director Harry Woodward suggested Graham apply for a scientific collectors permit and mailed him forms. Graham filled them out and returned them. Nothing happened for the rest of 1969.

In early 1970 Graham received a letter from Jack E. Hogue, Woodward's chief conservation officer. It was a notice to reduce his stock to two falcons within 30 days.

Graham telephoned Woodward who said he didn't know about the Hogue notice. He suggested a conference in his Denver office. It took place July 24, 1970. Laurence RJordan, assistant director of field operations, summarized the meeting in his minutes:

"Graham explained his interest and concern that something be done to try to prevent the complete extinction of the peregrine falcon, particularly the birds that traditionally or historically occupied the mid-latitude ranges throughout the northern hemisphere . . . According to several experts he quoted, the next 8 to 10 years could be crucial . . .

"His proposed solution to the problem is to collect and hold in captivity representative specimens of the several races of birds until such time as they can be reintroduced to their native ranges. . ."

RJordan suggested that the Colorado Game Department had "both the legal and moral responsibility to prevent the extinction of any native wildlife species" and it should "seriously consider entering into some type of cooperative working relationship with Graham to overcome the legal aspects of his having more than the two birds permitted by law."

Woodward now pointed out that a scientific collecting permit was not issued to individuals unless they are vouched for by a recognized scientific or educational institution. He suggested that Graham get some affiliation and promised to take "no precipitous action" while a solution was being worked out.

Meanwhile, Graham was granted a regular raptor license for 1970 and it was renewed in 1971. He built mews in his backyard, obtained a source of untainted food (small chickens) and continued his breeding plans, all out of his own pocket. At the same time he submitted detailed proposals for support

to the National Audubon Society, Cornell University, Colorado State University and the Interior Department's Patuxent Wildlife Research Center at Laurel, Md.

All were laudatory of Graham's goals. But all turned him down, pleading shortage of funds.

But Graham was cheered when interest was shown by the Zoological Society of San Diego, Calif. This reached the stage of preparing a contract for a \$615,000 10-year captive breeding program. At the last moment Graham was pushed aside by another project.

Woodward then suggested that Graham seek an amendment to the raptor laws which would permit an individual to keep more than two birds for breeding. Graham conferred with State Sen. George Jackson of Colorado Springs who agreed to sponsor such a bill in the 1971 Legislature. A proposed draft was endorsed by the local game officer, Jack Walch.

But somewhere along the line there was a signal change. Senator Jackson was informed that the state game department opposed his bill for an individual's breeding permit—the bill that Woodward had urged Graham to get.

At a Senate subcommittee hearing in February 1971 on the bill, Hogue testified there was no need for an individual breeding program because the state was supporting two organized breeding projects at CSU and Colorado College.

Graham countered with a charge that Hogue was misinforming the legislators. There were no breeding programs at CSU and CC for the state to support, he said. Graham had chaired a falcon-breeding seminar at CSU and was working closely with a CC falconer, and consequently "knew what I was talking about."

The colonel won a partial victory. The raptor law was amended to allow individuals to exceed the two-bird limitation if they are engaged in raptor breeding efforts "approved by the Division of Wildlife."

It was a hollow victory. Another amendment put clamps directly on Graham. Prior to 1971 the law defining raptors included the words, "all birds found in the wild on the North American continent that are members of the order of falconiformes, strigiformes, etc."

The legislators—on recommendation of the game department—removed from that definition these five words: "On the North American continent." This changed the Colorado law to bring under game department control any raptor a resident might have, no matter where it came from. Graham held three peregrine falcons from Spain. Up to this point, the possession limitation of two birds hadn't applied to the Spanish species.

Nonetheless, Graham submitted his application for an "approved" individual breeding program.

Meanwhile, a chance of a lifetime came up. An old friend in Spain, the Marques de Torrehermosa, Mauricio Lopez Roberts, offered Graham several pairs of the abundant Spanish peregrine falcons for the breeding project.

Says Graham: "They would be ideal for our research since they come from an identical latitude as our endangered peregrines and you can hardly tell them apart."

"I phoned Hogue in Denver and asked if the new state law (removing the 'North American continent' phrase) had been signed by the governor and was effective. If it had been, I would have needed permission from Hogue to import the birds."

"He said the new law hadn't been signed, but I should write him my plans, which I did. Col. Jim McIntyre who is in charge of the Air Force Academy falcon program agreed to sponsor my transportation on military aircraft to get the falcons from Spain."

Graham next contacted the Interior Department in Washington, D.C. He was told

wildlife must be brought into one of several designated ports of entry, otherwise a waiver must be granted by the government.

"I didn't know how many birds I would get or when or where my military plane would land," Graham says. "But wherever it was, it would be a place with U.S. Customs and I assured them I would fill out the applications and wildlife declarations."

What was said in these conversations with Washington is disputed now. In a letter dated May 16, 1971, just before the hurried trip to Madrid, Graham stated his travel plans to pick up about eight birds. Marshall L. Stinnett, the Bureau of Sports Fisheries and Wildlife enforcement branch chief with whom Graham spoke, says he never got the letter. (He also denies getting a second letter Graham sent a week later—after the trip.)

Nearly a year later—April 14, 1972—Stinnett wrote Graham saying he should have filed applications before leaving for Spain. He denied authorizing any exception to normal procedures.

What happened was this:

Graham flew from McGuire Air Force Base, N.J., to Spain in May 17, 1971, where he met his friend the Marques. The acquaintance began in the mid-'60s when Graham, stationed in Germany, was detached to help the Torrejon Air Base near Madrid solve a bird-hazard problem.

The solution: Fly a few falcons and they would quickly chase off the birds fouling up the airways. Presto: No more hazard.

The Marques surprised Graham by offering him 10 peregrine falcons. Graham fixed cages for the birds and within two days was winging back to the United States with them. Before leaving, he checked the military base administration section and was told Spanish regulations had been studied the previous summer when an Air Force Academy cadet took a peregrine. Only a health certificate was necessary and Graham obtained that for all the birds.

The plane Graham was on was to land at Dover Air Force Base, Del., about 8 p.m., May 21, 1971. The pilot, while over the Atlantic, asked Dover to notify U.S. Customs about the incoming falcons (Dover is a "non-designated" port of entry). Stinnett's name and phone number in Washington were provided in case of any questioning.

On arrival at Dover, Graham found the Customs agents knew nothing about the incoming falcons. So Graham declared them—gifts for breeding purposes, no commercial value—and Customs passed him through. Stinnett had told Graham he should file a Form 3-177 Declaration for the Importation of Fish or Wildlife, but Dover didn't have the form.

Graham went on to McGuire Air Force Base in New Jersey where he again checked with Customs. They didn't have a Form 3-177 either. "No problem," he was told. That was an error.

A friend drove Graham and the birds to Philadelphia where he took a commercial flight back to Colorado, the birds riding in the baggage compartment. In Colorado Springs Graham sent the second letter to Stinnett—which Stinnett says he didn't get—in which Graham mentioned the unavailability of the Form 3-177.

There was no reply and Graham says: "I assumed that since I'd cleared Customs, and since Interior didn't seem interested after my letter to them, it was no big thing."

Next Graham sent Chief Hogue a letter informing him of the big addition to his mews.

(Hogan got the letter but didn't respond.) Five months later Graham had an unnerving visit. Two federal agents—from Customs and Interior—came by his house and asked what "duties" he had paid on the imported birds.

"They mentioned the confiscation powers of Customs, the possibility of criminal

charges and the veiled threat of how an investigation would look on my military record," Graham recalls. "They talked about nondesignated ports of entry and the Lacey Act. I asked if they were advising me of my rights or seeking information to use against me.

"No, I was told, it was just that if any duties were owed, they wanted to be sure they were collected. I told them of the approval I got from Stinnett in Washington and they left."

In December 1971 Graham learned he was in fact being investigated by the Air Force's Office of Special Investigation (OSI).

"I met with OSI Agent Howard Rossiter to try and clear up the whole thing," Graham says. "Stinnett had written the Air Force saying that Interior had 'confidential' information that I may have stolen some falcons in Spain with an unnamed German national."

A month later the mail brought him Customs Form 5955-A, dated Jan. 10, 1972. It stated: "Demand is hereby made for payment of \$7,500 representing penalties assessed against you for violation of law or regulation as set forth below—

"From Nov. 5, 1969, to May 21, 1971, you imported 13 raptors (falcons), declaring them at 'no commercial value' or 'free entry' as personal baggage of a returning Vietnam serviceman."

Graham immediately wrote the Bureau of Customs demanding to see any possible documents on which they based their claims. Customs acknowledged his response and—in two letters—said there would be a delay because they were seeking more documentation themselves.

On March 14, 1972, came an amended "notice of penalty" dropping the Vietnam reference (Graham says he had no birds in Vietnam to bring back) but maintaining the \$7,500 assessment based on "the domestic value" of 13 falcons imported between 1969 and 1971 as "baggage of a returning serviceman and as property of the United States Air Force Academy."

Since there is no marketplace for falcons—Colorado law prohibits their purchase or sale—Graham asked how the government set a commercial value on them.

The Customs acting district director, J. G. Brenner, replied on March 31, 1972:

"The foreign values are determined in the market of the country of exportation where such or similar merchandise is freely sold or offered for sale. Domestic values represent value at the time and place of a seizure in the condition and quantities seized. Sincerely yours, J. G. Brenner."

On April 22 Graham sent a four-page, single-spaced typewritten letter detailing to Customs the source of his birds and the plans for them. He mentioned the common incorrect assumption that any Air Force officer with a falcon going to Colorado Springs must be with the Academy.

"There has been near-hysterical reaction toward one man attempting to make a contribution to wildlife," Graham wrote. "Many vested interests in the Fish and Game Departments as well as others feel that only a university or a governmental agency should make an attempt."

"It is ironic that as an individual with 30 years practical experience, and actually breeding the falcons in captivity at this time, I find myself under pressure which would prevent my contribution. Certainly no state or federal agency has a wide-ranging plan as that of the United Peregrine Society. Somehow this is neither correct nor just."

He attached copies of eight letters—from doctors, professors and zoologists—commending his preservation program and dedication.

Graham was deeply discouraged by what he considered unreasonable harassment, but he stuck doggedly by his guns. While he awaited an answer, he found another oppor-

tunity to increase breeding stock in the United States.

The Mexican government consented to the export of five pairs of endangered peregrines—on condition the United States approved. Graham asked for that permission on March 17, 1972, in a letter to Director Earl Baysinger of the U.S. Wildlife Bureau.

Graham explained that the birds would be cared for at Brigham Young University, Provo, Utah, by Dr. Clayton White, and at Centerville, S.D., by Don Hunter, past president of the North American Falconers Association. Both men are trustees of the United Peregrine Society. When the society establishes permanent breeding facilities, the birds would be placed there.

When he got no response, Graham went to Washington and obtained an appointment with Baysinger, who asked his enforcement chief, Stinnett, to sit in.

For an hour Graham enthusiastically described his hopes and beliefs on what could be done for the raptors, and Baysinger seemed to be impressed.

Stinnett then mentioned that there was "some question" with Customs over Graham's importing 10 Spanish birds. Stinnett felt that the Interior Department shouldn't authorize the Mexican import while that issue was pending, and that's the way Baysinger ruled.

The "question" with Customs remains unanswered and no hearing was ever set. It continued to be a factor, however, in later, more perilous developments.

Last spring Denmark authorized a population survey of the peregrine falcons of Greenland, where little information was available on these birds. Heading the expedition were Dr. William G. Mattox of Dartmouth College—and Graham. The Air Force granted Graham temporary duty—at no expense to the government—to perform the 90-day survey. Last June 20 the expedition left for Greenland from McGuire Air Force Base, N.J.

On that same day in Denver's U.S. District Court, another adventure began involving Graham. A small group of state and federal agents, armed with a very unusual search warrant, prepared to swoop down on Colorado Springs and raid Graham's falcons.

[From the Denver Post, Apr. 29, 1973]

#### THE RAID ON 5111 ROCKING R DRIVE

(By Zeke Scher)

The day last summer that Lt. Col. Richard Graham left the United States for Greenland to survey the endangered peregrine falcon, a small group of officials met in Denver's U.S. District Court to plan a raid on Graham's Colorado Springs home.

The Americans in the expedition left from McGuire Air Force Base, N.J., on Tuesday, June 20. In Denver, Asst. U.S. Attorney Charles Johnson accompanied by David Kirkland, a game management agent for the U.S. Bureau of Sport Fisheries & Wildlife (BSF&W), approached Magistrate Royce D. Sickler. Johnson docketed a case entitled *United States of America vs. 5111 Rocking R Drive, Colorado Springs, Colo. 80915*, and requested a search warrant.

The address is the home on the eastern edge of Colorado Springs for Graham, his wife Lorinda, their three children and 17 falcons, the world's most beautiful birds of prey.

Graham was assigned to Peterson Field in August 1969 after completing 250 fighter missions in Vietnam. His life-long love for birds and his expanding avocation of trying to save the endangered birds by a captive breeding program were detailed in the first installment of this story last week.

Graham came to Colorado with a gorgeous white Arctic gyrfalcon he'd trapped in Canada, and three Spanish peregrine falcons. Later he was given two prairie falcons, trapped two tundra peregrines in South Carolina and then received 10 Spanish pere-

grines (one of which escaped) from a friend in Madrid.

But Colorado law restricts a falconer to no more than two birds unless he has a breeding program approved by the State Wildlife Division. Graham's request for approval went unanswered.

As detailed in the first part of this series, eight months after Graham's return from Spain with the 10 donated birds, the U.S. Customs Bureau imposed a \$7,500 penalty on him, charging him with importing them illegally.

The fact that Graham was "under investigation" by federal agents was the reason Colorado officials ignored Graham's requests for permits and licenses.

Jack E. Hogue, chief conservation officer for the Colorado Wildlife Division, told *Empire*: "We wouldn't issue Graham any permits so long as he was being investigated. In fact, they (federal wildlife bureau) asked us not to issue him any."

Then, last June 20 in the Denver court, Johnson, the government lawyer, handed Magistrate Sickler the sworn statement by Game Agent Kirkland:

"On or about May 21, 1971, Graham . . . did import into the United States at Dover Air Force Base, Del., 10 Spanish peregrine falcons. At said time, Graham had not obtained a permit from the U.S. Department of Interior to bring wildlife through a non-designated port of entry. Graham did not file a Form 3-177, Declaration for Importation of Fish and Wildlife. Graham had not received authority from a foreign country, to wit, Spain, to export the 10 Spanish peregrine falcons as required by Title 18, U.S. Code. . . .

"On June 19, 1972, U.S. Game Management Agent Charles Hayes, Denver, Colo., informed me that Graham still had some of the illegally imported Spanish peregrine falcons in his possession and that there was a good possibility he would be leaving the state in the near future."

The magistrate signed the search warrant. It directed "any U.S. game management agent" to search 5111 Rocking R Drive and seize "10, more or less, Spanish peregrine falcons."

Under the court order, Hayes became director of the raiding party. He told *Empire*: "I decided we would make the seizure on Saturday morning because I was told that was the best time to catch Graham at home. The night before I got a phone call telling me Graham wasn't there. I didn't like that, but I decided to go ahead anyway because of all the preparations."

The preparations had begun long before the court issued the warrant. A pen for the to-be-seized birds was set up at the Denver Federal Center in a building formerly used for duck breeding research.

Hayes also built perches to handle a dozen birds in the back of an air conditioned station wagon. He, asked Colorado Game Department to assign its young raptor biologist, Gerald R. Craig, to help with the actual confiscation of the birds.

Craig is a 26-year-old Colorado State University graduate and the first raptor specialist hired by any state game department. He'd visited Graham's mews and could identify the Spanish birds better than any of the federal agents.

He emphasizes that he didn't volunteer for the task. "I was asked," he says. Craig was concerned about possible injury to the birds when they were approached by strangers, especially ones who don't know how to handle falcons.

Craig spent three evenings before the raid making soft leather hoods to put over the falcons' heads. The hood blinds the birds and generally keeps them quiet.

At 7 a.m. Saturday, June 24, Hayes picked up Kirkland and Craig and the three drove in the station wagon to Colorado Springs. There they stopped at the game department of-

face where they were joined for the raid by Agent Howard Rossiter of the Air Force's Office of Special Investigations (OSI).

While these four proceeded to 5111 Rocking R Drive, another federal game agent, Jack Randall, drove to Canon City to seize two peregrines known to be held for Graham at the home of Bill Burnham, who also was away on the Greenland survey. (Since the search warrant didn't cover Burnham's home, Randall's authority was at best questionable.)

At 5111 Rocking R Drive, Lorinda Graham was on a second cup of coffee when the doorbell rang. She found four men at the front door. Kirkland identified himself and explained the search warrant. "I heard the words but I really didn't understand that they intended to take the birds away," she recalls. "I told them Richard wasn't home." "Yes, we know," Kirkland replied. "We just found out last night."

Mrs. Graham led the men to the back yard "to look at" the falcons. She unlocked one of the three mews.

Craig alone went inside. A few minutes later he walked out with a hooded bird—a majestic 5-year-old female Spanish peregrine that Graham owned before he came to Colorado. Mrs. Graham was shocked. She suddenly realized the men were really going to take her husband's beloved falcons.

She slammed the lock back on the door and ran into the house to call a lawyer. Kirkland stood at the door demanding she re-open the mews or they'd break the door down. She couldn't reach the lawyer. She called another Colorado Springs falconer, Rodger (Buddy) Graver, and he sped over to help the distressed woman.

Graver pleaded with the officers not to endanger the birds' lives by taking them when Graham was away. Meanwhile, Mrs. Graham reached the legal officer at Peterson Field where her husband is stationed and explained the situation. He said she had no recourse if there was a legal search warrant.

One by one, Craig carefully hooded the falcons—10 of them—and removed them to the station wagon. Agents Hayes and Kirkland assured Mrs. Graham the birds would be properly cared for but they refused to reveal where they would be held. The officers drove away and the woman collapsed. A physician was called and Mrs. Graham was taken to the Peterson Field medical facility.

She was given an electrocardiogram because of heart attack symptoms. This proved negative but she was given medication (which she continues to require). The Air Force was asked to notify her husband.

Graham on that day was on a backpack trip into the wilderness some 30 miles from Sondrestrom Air Force Base in Greenland. He wouldn't return until Monday.

Hayes, Kirkland and Craig drove with the birds from Colorado Springs to Canon City where they met Randall. He was awaiting their arrival before approaching Burnham's wife, Pat, for the two peregrines at her home. The woman turned them over.

This gave them all of Graham's Spanish peregrines—three he'd owned (without dispute) since 1969, and nine of those he brought in from Spain. The officers arrived at the Denver Federal Center shortly after 6 p.m. They'd had no trouble with the birds.

Mrs. Graham finally got word to her attorney, J. Gregory Walta, and he immediately began action to get the birds released.

On Monday afternoon, June 26, two days after the raid, an unusual stipulation was submitted to Judge Alfred A. Arraj in Denver's U.S. District Court. Government Attorney Johnson agreed to the return of all birds if the Grahams posted \$1,000 bond and agreed not to take the falcons out of Colorado.

The stipulation informed the court: "There is danger that such falcons may expire un-

less they are returned to Mr. and Mrs. Graham."

Judge Arraj approved the action. (There still was no suit—civil or criminal—filed against Graham. There never was.)

When Colonel Graham finally received word of the seizure he left the expedition and hurried home. By Wednesday noon he was back in Colorado Springs. The previous afternoon Mrs. Graham and two falconer friends, Buddy Graver and Roger Smith, armed with the court order, went to the Federal Center and asked Kirkland for the birds.

Kirkland demanded that she sign a release stating the birds were in the same condition as when they were taken. She refused until she could examine the falcons. They were returned to 5111 Rocking R Drive, apparently none the worse for the roundtrip to Denver.

Attorney Walta sought some legal answers. In what type of litigation was the search warrant obtained? Why was it necessary to seize and imperil the rare birds? (U.S. Attorney Johnson tells *Empire* the warrant was obtained "in anticipation" of filing a federal court action.) Walta and Graham could learn only that a complete report on the case had been forwarded to the attorney general in Washington, D.C.

Eight months passed. Then Walta learned the attorney general's office had vetoed any prosecution of Graham and had returned the case to the federal wildlife agency (BSF&W).

The U.S. attorney in Denver, however, refused to drop the \$1,000 bond and the restraining order despite the lack of a case. So Walta forced the issue by going to Judge Arraj.

Last Feb. 21, Graham, in uniform with a chestful of decorations, sat beside Walta in Judge Arraj's Denver courtroom. Agent Kirkland sat with Johnson at the opposite table. Walta opened the proceeding by calling Graham to the witness stand. Graham began an outline of his 32 years' experience with hawks and falcons. But Johnson interrupted to object.

"I'll concede that Colonel Graham is a falconer but I object to trying this case on the merits," he said.

Walta said the purpose of the testimony was to show why Graham is keeping the birds.

Judge Arraj asked a question that seemed to startle Johnson: "Why not try the case on the merits?"

Johnson replied that "other" proceedings were pending and that "Graham could leave the country."

"If he crosses the state lines with a falcon, he will violate the Lacey Act," Johnson said. "The government is trying to protect him."

"Protect him?" asked Walta.

"We're trying to help Colonel Graham not take the law in his own hands," explained Johnson. "I'll concede there is no necessity for the bond."

Walta asked the judge how the government could keep Graham under bond for eight months without filing a charge. Johnson offered an apology, adding that the preparation of charges "takes time."

"I'm granting the motion to dispose of the bond," said Arraj. The hearing was adjourned.

A heated exchange between Walta, Graham and Johnson continued to the hallway. "It takes the government seven months to find out what the law is?" asked Walta. "How is the individual supposed to know?"

"Our position is that when the birds came in there was a question whether they were legally imported birds," said Johnson. "And after this hearing today, I'm going to do everything I can to stick you. I shouldn't get emotionally involved but I am."

The dismissal of the bond was another hollow victory for Graham.

His letters to the Colorado Wildlife Division's Director Harry Woodward, biologist Craig and enforcement chief Hogue, asking approval for his breeding program, remained unanswered.

Reports that he was "under investigation" continued to circulate. U.S. Customs did not drop its \$7,500 penalty assessment on Graham for the Spanish peregrines—but failed to set a hearing to dispose of the matter. His service-connected flights in and out of the country resulted in closer scrutiny of his luggage.

The only conclusion Graham could reach was that others were more concerned with harassing him than with saving the endangered species. So he decided to bring the situation into the open.

First he got permission to address the monthly meeting of the Colorado Wildlife Commission's Game Committee. And then he asked the Colorado Department of Natural Resources director, Tom Ten Eyck, who supervises the Wildlife Division, to hold a meeting with all concerned to clear the air.

On Feb. 8, Graham appeared before the wildlife game committee.

"I want to report what I consider gross harassment by the Game Department," Graham began, then reciting in chronological order his licensing and permit problems since returning from Vietnam in 1969.

On his clash with Hogue in the Legislature on a raptor law amendment, Graham said: "I feel Mr. Hogue told me to play frog and I didn't jump."

On the Wildlife Division ignoring him: "I have a year's correspondence here with no response."

On official indifference: "Cornell University had a female prairie falcon ready to breed and requested I ship my home-raised male prairie falcon. I asked Colorado permission to send it. I got no answer."

On his preservation program: "I'm an individual trying to do something. As long as they ignore me, they're effectively using their investigative powers for punitive action."

The chairman, Dr. Wilton Cogswell, Jr., assured Graham: "It's not the intention of the Wildlife Division to harass you. We'll order a report to the commission and to you. I thank you for bringing it to our attention."

The next day, over Woodward's signature, Graham got a reply:

"The Division's position has been that information on the legality of birds in possession . . . should be verified . . . Investigations into the legality of holding some raptors by Colonel Graham were initiated prior to July 1970 by the Bureau of Sport Fisheries & Wildlife, assisted by other agencies. These have continued until the present time and are still pending. U.S. Customs violations on the importation of some of the raptors now in his possession are a matter of record . . ."

"Lastly, our correspondence and record files will show that lack of answers to Colonel Graham's inquiries do not exist and that harassment, from the Division's standpoint, has not occurred."

(Editor's note: Graham has not been found guilty of any customs violations.)

Woodward added that if bird legality is proved, the Division would still scrutinize cautiously Graham's research objectives.

The reply was another frustration for Graham. He'd already submitted all the information he had on his Spanish peregrines including the health certificate obtained in Spain and a letter from the donor. He had no other "documentation."

On the following Wednesday, Feb. 14, Graham, Walta, Woodward and Craig met with Resources Director Ten Eyck.

The meeting started on a sour note. There was no federal representative as promised, and as a result nothing would be learned about the federal position.



In the three-hour discussion that followed, Ten Eyck acted as interrogator and moderator, seeking immediate responses to Graham's charges of improprieties.

"We got letters saying Graham was going too fast for the good of the birds," said Craig. "The letters are in the file."

"That's the first time I've heard of that," said Graham.

"I've got a stack of letters here about Mr. Woodward," said Ten Eyck. "Does that convict him of anything? If you have complaints against Graham, you should give him a chance to hear them and answer. I believe that involves fundamental due process of law."

"If anyone is really interested in these birds, some communication should have been had," said Walta. "It seems to me that all efforts at communication came from this side."

Ten Eyck said: "I have the impression that Colonel Graham is a dedicated researcher in the falcon field."

"I don't dispute that," replied Craig.

"Does he have any improper motive?" asked Ten Eyck.

"I can't say that," replied Craig. "Legality of the birds is the issue."

"Then Graham is guilty until proven innocent?" asked Ten Eyck.

Woodward said the Division just wants documentation.

"He got silence from you," Ten Eyck said. "How does he interpret that? We've got to do better. In what way is his documentation inadequate? I get the impression he's tried like hell to do the right thing."

Walta asked: "Is the whole concept of breeding for future release a good idea? If so, let's cooperate with those truly interested scientists."

"We are for captive breeding," said Craig, "but I can't put much faith in individual projects. Graham has the drive and as much dedication as anyone but he may have overstepped the bounds by not going through channels."

Woodward said all the Division wanted was legal documentation or "a legal explanation" on the Graham birds.

"A legal explanation?" replied Ten Eyck. "Now that's different from legal documentation. I haven't heard you say that before, Harry. I worked in Spain for two years and for \$10 you could get any official document you wanted. I don't think you want just a phony document."

When Graham again told about his letters to Craig and Hogue which went unanswered, Ten Eyck interrupted him: "I think you've rubbed their nose in it pretty good. You've made your case, Harry. I can't assess it any other way."

"I assess it that way too," Woodward admitted.

"I hate to see bureaucracy lose sight of our real goal—preservation of the species rather than Form X," said Ten Eyck.

What Ten Eyck didn't know, but what Woodward, Craig and Hogue did know at that time, was that the federal BSF&W was filing "administrative" charges against Graham concerning the importation of the 10 Spanish birds.

Denver wildlife agent Hayes was informed Feb. 6 from Washington that a three-count "notice of violation" was being sent by certified mail. He informed the state agents but "law enforcement ethics" forbade their disclosure until Graham was served.

The charges, dated Feb. 7, were not received by Graham until he picked up the certified letter at a Colorado Springs branch post office on Feb. 20, long after both the meetings with the commissioners and with Ten Eyck.

The four-page "notice of violation" accused Graham of illegally bringing in the falcons at Dover, Del., "not a designated port of entry for importation of fish and wild-

life." A civil penalty of \$2,000 was "assessed" for that offense.

A second count accused Graham of violating the laws of Spain. "You have not been issued any permit or authorization from the Spanish Ministry of Agriculture or his delegate showing that you had permission to leave the country with these birds," it was charged. A \$1,000 penalty was imposed for that.

The third count made Graham liable for a \$1,000 penalty and forfeiture of the peregrines for failure to file Form 3-177 with the Customs Bureau.

Graham was given 20 days to notify the Secretary of the Interior if he would pay penalties or contest the charges. He didn't need 20 seconds to decide.

A "notice of contest and request for hearing" was sent to Washington, D.C. The reply was prepared by Walta and a new face on the Colorado Springs scene, Shephard Kole, a New York attorney who successfully championed the cause of the Amish in an early '60s battle with the government over Social Security taxes.

Kole, 55, moved to Colorado in January, just four blocks from Graham. When he heard about his neighbor's plight, he volunteered his services.

Among the points raised by Walta and Kole:

The Lacey Act (which would convict Graham of a Spanish law violation) is unconstitutional because it delegates legislative powers to every foreign country on Earth.

Spanish hunting laws didn't apply because the donated birds were domestically owned by a Spanish citizen with a valid permit. No violations were charged by Spanish authorities.

Graham informed authorities at each step of the importation, was granted Customs clearance and no objection was made, reaffirming a government waiver of procedural formalities nearly two years ago.

If the lack of a Form 3-177 is a continuing problem for the government, the attorneys continued, "Graham stands willing and able to complete Form 3-177."

Late last month another surprise was injected into the debate. Dr. Emilio Gomez-Manzanares, agricultural attache for Spain in Washington, D.C., sent a letter to the director of the federal wildlife bureau.

"... I feel required to bring to your attention that the charges of violation ... of the Spanish Hunting Regulations are based on a mistranslation," the Spanish official stated. "The Spanish term 'piezas de caza' which appears in the original text of the Spanish law has been translated as 'hunting animals' in your notice, when it really means 'game.' Therefore, it does not apply to falcons, hawks and other birds of prey."

"Consequently, I consider that there are no grounds for the charges made against Colonel Graham based on the referenced Spanish Hunting Law."

The proposed contest will be before a hearing officer to be named, probably in Denver. At this writing no date has been set.

When the lawyers finally get around to debating the issues, I wonder if anyone will offer a word for the birds in Colonel Graham's back yard. If the litigation goes on long enough, the subject matter could well vanish.

Mr. TUNNEY. Mr. President, this amendment has been discussed with the Senator from Alaska, and he has indicated that he approves of this amendment.

I am prepared to yield back the remainder of my time, if the Senator from Kentucky is prepared to do the same.

Mr. COOK. Mr. President, we have no objection to this amendment and I yield back the remainder of my time.

The PRESIDING OFFICER. The question is on agreeing to the amendment.

The amendment was agreed to.

Mr. TUNNEY. Mr. President, I move to reconsider the vote by which the amendment was agreed to.

Mr. COOK. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. TUNNEY. Mr. President, it is my understanding that the Senator from Kentucky has an amendment.

Mr. COOK. Mr. President, I am in the process of having that amendment prepared, and I have one other amendment I am trying to check now with the Senator from Alaska.

Mr. TUNNEY. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. On whose time?

Mr. TUNNEY. To be equally divided.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. ROBERT C. BYRD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.



ENDANGERED SPECIES ACT OF 1973

The Senate continued with the consideration of the bill (S. 1983) to provide for the conservation, protection, and propagation of species or subspecies of fish and wildlife that are threatened with extinction or likely within the foreseeable future to become threatened with extinction, and for other purposes.

Mr. COOK. Mr. President, I send to the desk an amendment and ask for its immediate consideration.

The PRESIDING OFFICER. The clerk will report the amendment.

The legislative clerk read as follows:

On page 43, line 11, insert the following: strike the word "such," and insert the word "any."

Mr. COOK. Mr. President, an earlier version of this bill provided that the appropriate Secretary review other programs administered by him and utilize such programs in furtherance of the purpose of the act. The bill provided further that all other Federal departments and agencies, shall, in consultation with and with the assistance of the Secretary, utilize their authority in furtherance of the purpose of the act by carrying out programs for the protection of endangered species or subspecies of fish and wildlife by taking such action necessary to insure that actions authorized, funded or carried out by them do not jeopardize the continued existence of endangered species.

I am in complete agreement with this provision as stated, but it did not go far enough as it did not protect the habitat of the endangered species. I therefore

recommended to the committee, and I am pleased that the bill we are now considering includes a provision which would prohibit the destruction or modification of the critical habitat of such species.

Mr. President, the only purpose of my amendment to change the word "such" to "any" is to make the provision all inclusive. I think we should be concerned with the habitat of all wildlife instead of considering that of endangered species.

We have a situation in my State that falls in this category.

Mr. TUNNEY. Mr. President, I ask the Senator whether the effect of his amendment would be, first, if the Bureau of Public Roads wanted to build a highway through an area of the country, as it deemed necessary for the citizens of the Nation, if it would be prevented from doing so by changing the word "such" to "any."

Mr. COOK. Mr. President, I would be less than fair with the Senator if I would say otherwise to him. It is conceivable that this could happen. It is conceivable also that never would happen.

The only point I am making is that they would have to have consultation with the respective agency. The point I have in mind is that we have the Pioneer Weapons Hunting Area in the State of Kentucky. It is the only one of its kind in the United States. There is no other. It is a tremendous nesting area for wild turkeys.

I might suggest that the Corps of Engineers decided that it would build a road right through the middle of this area. We have tried our best to have them change the route of the road. They had alternate routes, but they decided, despite their alternative routes, that this is where they would build the road.

This language means that they have to consult with the respective agencies under this bill, and they have to consult with the respective State agencies in order to work out this problem. That is exactly what it means. And I would be less than candid if I did not explain that to the Senator.

Mr. TUNNEY. Mr. President, as I understand it, after the consultation process took place, the Bureau of Public Roads, or the Corps of Engineers, would not be prohibited from building such a road if they deemed it necessary to do so.

Mr. COOK. The point is that they would then be doing it after consultation with the respective agencies, rather than making that decision on their own.

Mr. TUNNEY. But they would have the final decision after consultation.

Mr. COOK. The Senator has put me in a rather bad light. Under the terms of this, it would have to be under an agreement worked out with the respective agencies.

Mr. TUNNEY. Mr. President, as I understand the legislation, just reading the language:

All other departments, agencies, and instrumentalities of the Federal Government shall, in consultation and with the assistance of the Secretary—

(b) take such action as is necessary to insure that actions authorized, funded, or

carried out by them do not jeopardize the continued existence of any endangered or threatened species, or result in the destruction or modification of any habitat of such species which is determined by the Secretary, after consultation to the extent appropriate and necessary with affected States, to be a critical habitat of such species.

So, as I read the language, there has to be consultation. However, the Bureau of Public Roads or any other agency would have the final decision as to whether such a road should be built. That is my interpretation of the legislation at any rate.

Mr. COOK. Mr. President, we find ourselves in a position where we are debating or really talking about endangered or threatened species, and that is where the consequence of this amendment lies.

I might suggest to the Senator from California that if the Senator feels this might be the burden of this language, I do have another amendment which would designate this area.

Mr. TUNNEY. Mr. President, I would prefer it if the Senator would withdraw his pending amendment. I know what the Senator's next amendment is. And I support that amendment. I recognize that the Senator has to secure unanimous consent to make the amendment germane to the bill. However, I am prepared to accept the amendment. I have looked it over.

I do not think there is any desire on the part of any Senator on the floor to object to a unanimous-consent request that the amendment be considered.

Mr. President, I am hesitant, as the floor manager of the bill, to accept the amendment. This does broaden considerably the impact of the language which requires consultations with the respective agencies and the Department and the Secretary of Interior. It moves it from endangered species to any species of animal. And with that extension of the language on the floor and without any hearings, I believe it is something that I would not be able to accept.

Mr. COOK. Mr. President, I withdraw my amendment.

The PRESIDING OFFICER. The amendment is withdrawn.

Mr. COOK. Mr. President, I send to the desk an amendment which is the same as S. 1532 which I introduced earlier this year and ask that it be immediately considered.

The PRESIDING OFFICER. The clerk will report the amendment.

The legislative clerk proceeded to state the amendment.

Mr. COOK. Mr. President, I ask unanimous consent that further reading of the amendment be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered.

The amendment reads as follows:

At the end of the bill, add the following:

That, in accordance with section 3(b) of the Wilderness Act (78 Stat. 892; 16 U.S.C. 1132(b)), those lands in the Daniel Boone National Forest, Kentucky, comprising the Pioneer Weapons Hunting Area and consisting of approximately seven thousand three hundred acres, are hereby designated as wilderness.

SEC. 2. As soon as practicable after this Act takes effect, a map of the wilderness area and a description of its boundaries shall be filed

with the Interior and Insular Affairs Committee of the United States Senate and House of Representatives and such map and description shall have the same force and effect as if included in this Act: *Provided, however, That correction of clerical and typographical errors in such legal description and map may be made. A copy of such map and description shall be on file and available for public inspection in the offices of the Chief, Forest Service, United States Department of Agriculture.*

SEC. 3. The wilderness area designated by this Act shall be known as the Cave Run Wilderness and shall be administered by the Secretary of Agriculture in accordance with the provisions of the Wilderness Act governing areas designated by that Act as wilderness areas, except that any reference in such provisions to the effective date of the Wilderness Act shall be deemed to be a reference to the effective date of this Act.

SEC. 4. Nothing in this Act or the Wilderness Act shall be construed as precluding the construction of a Zippo recreation site access road generally on a route extending northward from Forest Development Road Numbered 129 generally skirting the eastern boundary of the Pioneer Weapons Hunting Area, or as affecting or modifying in any manner the 1962 Cooperative Management Plan between the Department of Fish and Wildlife Resources of the State of Kentucky and the Department of Agriculture involving the designation of the Pioneer Weapons Hunting Area within the Daniel Boone National Forest.

Mr. COOK. Mr. President, I ask unanimous consent that as to this amendment the rule of germaneness be waived.

Mr. ROBERT C. BYRD. Mr. President, the Senator does not have to ask unanimous consent as long as no Senator makes a point of order.

The PRESIDING OFFICER. The Senator from West Virginia is correct.

Mr. COOK. Mr. President, I thank the Senator from West Virginia.

Mr. President, I thank the Senator from California, because this now gives me an opportunity to clarify the situation.

Mr. President, I believe that S. 1983 as written will contribute to the guarantee we all want that succeeding generations will enjoy some measure of nature and wildlife as we have known it. However, I would like further assurance for the people of Kentucky.

Mr. President, in my State of Kentucky, we have located at Cave Run, in Daniel Boone National Forest, a Pioneer Weapons Hunting Area. Within this area are various species of wild turkeys, white-tailed deer, red and grey foxes, ruffed grouse, dove, and quail. During the past year there have been attempts made to bisect this Pioneer Weapons Hunting Area by construction of a road through the normal nesting and grazing area of these species. To do so would most assuredly destroy or severely endanger the species. The tragedy is in the fact that a feasible alternate route is available that would generally skirt the Pioneer Weapons Hunting Area. We cannot permit such inconsiderate and ill-conceived projects to continue.

The amendment would now add a new section to the bill which would designate under section 3(b) of the Wilderness Act of the United States Code, that this area be designated as a wilderness area. Therefore, having such a designation, it

is in the unique position of not being subject to this kind of tampering.

If we can get this accomplished, we will solve a problem and this has been going on for more than 2 years on my part.

We no longer have to fear that an agency can decide to arbitrarily build a major highway which bisects this area. I assure my colleagues that this would be of significance to the Pioneer Weapons Hunting Area located in the Daniel Boone National Forest in Kentucky.

Mr. TUNNEY. Mr. President, I have had an opportunity to consult with the Senator from Kentucky on his amendment. It is a good amendment. It is specific. It clearly focuses on the problem. I am prepared to accept the amendment.

I yield back the remainder of my time.

Mr. COOK. Mr. President, I yield back the remainder of my time.

The PRESIDING OFFICER (Mr. HASKELL). All remaining time having been yielded back, the question is on agreeing to the amendment of the Senator from Kentucky.

The amendment was agreed to.

Mr. COOK. Mr. President, I move to reconsider the vote by which the amendment was agreed to.

Mr. TUNNEY. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. TUNNEY. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. Under the precedents of the Senate, the Senator does not have enough time remaining on the bill to suggest the absence of a quorum.

Mr. TUNNEY. I ask unanimous consent that I may suggest the absence of a quorum without the time being charged to either side.

The PRESIDING OFFICER. Without objection, it is so ordered. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

The hour of 2 p.m. having arrived, the Senate will now proceed to vote on the amendment of the Senator from Alaska (Mr. STEVENS) to S. 1983.

On this question the yeas and nays have been ordered and the clerk will call the roll.

The assistant legislative clerk called the roll.

Mr. ROBERT C. BYRD. I announce that the Senator from Nevada (Mr. CANNON), is necessarily absent.

I further announce that the Senator from South Dakota (Mr. ABOUREZK) is absent on official business.

I also announce that the Senator from Mississippi (Mr. STENNIS) is absent because of illness.

Mr. GRIFFIN. I announce that the Senator from Oklahoma (Mr. BELLMON) is absent to attend the funeral of a friend.

The Senator from New Hampshire (Mr. COTTON) is absent because of illness.

The Senator from Maryland (Mr. BEALL) and the Senator from Arizona

(Mr. GOLDWATER) are detained on official business.

The result was announced—yeas 60, nays 33, as follows:

[No. 321 Leg.]

YEAS—60

Aiken	Fannin	Metcalf
Allen	Fulbright	Montoya
Baker	Gravel	Moss
Bartlett	Gurney	Nunn
Bennett	Hansen	Pearson
Bible	Helms	Percy
Biden	Hollings	Randolph
Brock	Hruska	Saxbe
Burdick	Huddleston	Scott, Pa.
Byrd	Inouye	Scott, Va.
Harry F., Jr.	Jackson	Sparkman
Chiles	Johnston	Stafford
Church	Long	Stevens
Clark	Magnuson	Symington
Cook	Mansfield	Talmadge
Curtis	Mathias	Thurmond
Dole	McClellan	Tower
Domenici	McClure	Welcker
Domnick	McGee	Young
Eagleton	McGovern	
Eastland	McIntyre	

NAYS—33

Bayh	Hartke	Packwood
Bentsen	Haskell	Pastore
Brooke	Hatfield	Pell
Buckley	Hathaway	Proxmire
Byrd, Robert C.	Hughes	Ribicoff
Case	Humphrey	Roth
Cranston	Javits	Schweiker
Ervin	Kennedy	Stevenson
Fong	Mondale	Taft
Griffin	Muskie	Tunney
Hart	Nelson	Williams

NOT VOTING—7

Abourezk	Cannon	Stennis
Beall	Cotton	
Bellmon	Goldwater	

So Mr. STEVENS' amendment was agreed to.

The PRESIDING OFFICER. The bill is open to further amendment.

Mr. FULBRIGHT. Mr. President, I send an amendment to the desk.

The PRESIDING OFFICER. The amendment will be stated.

The assistant legislative clerk read as follows:

On page 66, line 12, strike "the Secretary of the Smithsonian Institution" and insert in lieu thereof "The Secretary of Agriculture."

Mr. FULBRIGHT. Mr. President, this provision, authorizing the money to the Smithsonian Institution, was not in the original bill. It was inserted in the House, in the Subcommittee on Commerce, by Representative DINGELL.

I have consulted the Smithsonian, and Mr. Michael Huxley, the Assistant Secretary, has informed me that they do not wish to pursue this; and they have suggested the substitution of the Secretary of Agriculture for the Smithsonian Institution.

The Smithsonian is interested in this subject, but they do not feel that they are in a position today to carry out the program which is here authorized, and they have suggested that the Department of Agriculture be substituted. It is my understanding that this amendment is acceptable to the chairman of the committee.

Of course, if the Department of Agriculture wishes the cooperation of the Smithsonian, I am quite sure they can obtain it, insofar as the Smithsonian's facilities will permit them to do so.

Mr. TUNNEY. Mr. President, it is my understanding that the amendment would enable the Department of Agri-

culture to contract with the Smithsonian Institution to conduct a part of the study if the Department of Agriculture felt that it was necessary—or, for that matter, to contract with any other Federal agency, State agency, or private individual for the purpose of conducting that study.

Mr. FULBRIGHT. I see nothing to prevent that, either.

I must say that I had no notice of this matter until a couple of hours ago, and on inquiry from the Smithsonian, this is the best information I have.

Mr. TUNNEY. I certainly have no objection to the amendment; but I want to make clear that it is the manager's understanding that it would not prevent the Secretary of Agriculture from contracting with the Smithsonian Institution or any other group or agency for the purpose of conducting the study.

Mr. FULBRIGHT. So far as I can see, there is nothing to prevent that. It is up to the Department of Agriculture.

Mr. TUNNEY. I accept the amendment, and I yield back the remainder of my time.

Mr. FULBRIGHT. I yield back the remainder of my time.

The PRESIDING OFFICER. The question is on agreeing to the amendment of the Senator from Arkansas.

The amendment was agreed to.

The PRESIDING OFFICER. The bill is open to further amendment.

Mr. NELSON. Mr. President, I send an amendment to the desk.

The PRESIDING OFFICER. The amendment will be stated.

The assistant legislative clerk proceeded to read the amendment.

Mr. NELSON. Mr. President, I ask unanimous consent that further reading of the amendment be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered; and, without objection, the amendment will be printed in the RECORD.

The amendment is as follows:

On page 32 insert the following new subsection after Section 3(14):

"(15) 'chemical toxicant' means any chemical substance designed, intended, or employed to control or eradicate insects, rodents, predators and any other wildlife, or plants, by causing significant bodily malfunction, injury, illness, or death immediately or in the future."

On page 39, line 23, immediately before the semicolon, insert a comma and the following: "and plans to issue regulations prohibiting the use of chemical toxicants within the areas comprising such lands, waters, and interests so acquired, in a manner comparable to that provided under section 10(a) (10)."

On page 52, insert the following new subsection after section 10(a) (9):

"(10) uses any chemical toxicants within any area, comprising lands and waters, including interests therein, of the United States, which were acquired and are being utilized for the purpose of conserving, protecting, restoring, or propagating any endangered or threatened species, except that the Secretary may authorize the use of a chemical toxicant, but only if he makes a written finding which he shall publish in the Federal Register, that:

"(A) an emergency exists to the endangered or threatened species that cannot be dealt with by means which do not involve the use of chemical toxicants, and that such

use is necessary for the survival of the endangered or threatened species; or

"(B) a particular method of applying a chemical toxicant will not impair the survival of an endangered or threatened species."

Mr. NELSON. Mr. President, this act is designed to stave off the extinction of our wildlife by protecting the endangered species from men who might knowingly or inadvertently harm them. Because of this act, an animal or fish species will not be overtly "taken."

Yet, it is common knowledge that there is another danger to our wildlife, a threat which is unavoidable: the expansion of our cities and industries. But we should also watch that we not destroy the animal world, made helpless by human technology. This act acknowledges that habitat modification is liable to be increasingly prevalent as the cause of future wildlife losses. The Secretaries of Interior and Commerce are authorized to acquire the lands upon which the endangered and threatened species reside and funds are provided for this purpose. Habitat acquisition will provide a framework, a base for the construction of true sanctuaries, preserves free from harmful human intrusions. This amendment would aid in safeguarding the sanctuaries of the endangered species.

Around 10 years ago we first learned the insidiousness of chemical poisons: how the residues of herbicides, insecticides, of pesticides in general, remain and find their way into the tissue of the low members of the food chain which are consumed by the next higher and so on, until the birds and mammals of prey, representing the top of the food chain, accumulate massive concentrations of chemical poisons.

They become the victims of chemical toxicant poisoning in the form of reproductive failures, incapacitation, or death.

There are presently eight species upon the Department of the Interior's red book list of rare and endangered species, including the southern bald eagle and the California condor which have been decimated by the use of chemical toxicants. Other species like the prairie falcon will have to be added to the future endangered and threatened species lists because of our widespread use of pesticides. This amendment does not cover much area, only those small preserves which are wholly dedicated to endangered species protection.

Poisons are so lethal and the existence of endangered species so precarious that we must be overly cautious to avoid chemical disasters. This amendment applies to those lands "acquired and being utilized for the purpose of conserving, protecting, restoring, or propagating any endangered or threatened species." However, the Secretary is authorized to allow the use of chemical toxicants if he finds that that use is needed to insure the survival or that such use will not at all affect the survival of an endangered or threatened species.

The amendment prohibits the use of chemical poisons upon the lands that the Federal Government and the States has and will acquire as selected habitat for the endangered or threatened species. The lands this amendment refers to are primarily those in the National Wild-

life Refuge System and those lands which State Fish and Game Departments will oversee. The ratio will be even more lopsided for the lands the States will acquire under the provisions of this act. For example the California Department of Fish and Game has identified seven of its indigenous rare and endangered species of wildlife as being presently threatened by county rodent control programs and is negotiating a joint policy agreement with the California Department of Food and Agriculture so that the two Departments will cooperate more closely. In other words, the Fish and Game Department is very concerned, and with good reason, that control people in the field will not realize until it is too late that they are using chemical toxicants within the areas upon which the endangered and rare species are making their last stand.

Mr. President, this is a very simple amendment which provides that chemical toxicants, poisons, may not be used on those lands which are—

Acquired by and are being used for the purpose of conserving, protecting, restoring, or propagating any endangered or threatened species, except that the Secretary may authorize the use of a chemical toxicant, but only if he makes a written finding which he shall publish in the Federal Register.

That the use of chemical toxicants is necessary for the purpose of protecting endangered species.

I think there is no controversy about the amendment. I ask the Senator if he is willing to accept it.

Mr. TUNNEY. Mr. President, I want to make sure I understand the amendment. Does the amendment provide that the Secretary of Interior must make a positive finding that before chemical toxicants can be used such a toxicant will protect the species or not hurt the species?

Mr. NELSON. He must file a statement saying that the use of the chemical toxicant is necessary for the purpose of protecting the endangered species. Otherwise it may not be used on sanctuary lands.

Mr. TUNNEY. Let me make sure that I understand the lands this applies to. The Senator said sanctuary lands.

Mr. NELSON. Yes. In the amendment it is described as—

Lands acquired and being utilized for the purpose of conserving, protecting, restoring, or propagating any endangered or threatened species.

The Government is going to be acquiring lands under this provision and there are sanctuary lands already set aside; the amendment applies to these lands unless the Secretary says that the use of toxicants is necessary for the protection of endangered species.

Mr. TUNNEY. Are toxicants presently allowed to be used on sanctuary lands?

Mr. NELSON. For example, I think there is a case in the Senator's State where there are two different agencies. One agency used chemical poisons to kill rodents and one of the endangered birds was being poisoned by the poisons being used to kill rodents. Those two departments of the state government which were operating with conflicting purposes have now reached an agreement. But

this is the kind of case that could occur. Poison could be used on some lands where you are trying to protect a species, and at the same time they are threatening the survival of the endangered species.

This provides that poison cannot be used on those lands unless the Secretary certifies that it is necessary to protect the species for which the sanctuary is in existence.

Mr. TUNNEY. What if it is a State sanctuary as contrasted with the Federal sanctuary? If it were a State sanctuary would they have to get authorization from the Secretary of the Interior?

Mr. NELSON. That is the way I interpret it.

Mr. HANSEN. Mr. President, will the Senator yield?

Mr. NELSON. I yield.

The PRESIDING OFFICER. The Senator from Wyoming is recognized.

The Senate will be in order. The Senator may proceed.

Mr. HANSEN. I am wondering about this situation. In times past, in western Wyoming, the State game and fish commission has found it advisable to employ the use of so-called coyote getters in and around elk winter feeding areas. I am not certain that has been used in national elk sanctuaries.

My question is, if in the judgment of the Fish and Wildlife Service, or the Bureau of Sports, Fisheries, and Wildlife, as it is now called, it became necessary to try to bring some effective control upon the coyote—we have trumpeter swan and waterfowl and other birds in addition to elk, which is the major big game animal in the area, although there are moose, deer, and mountain sheep—would this amendment prohibit any control of the coyote within the national elk refuge, if it is permitted, assuming it may be, if in the judgment of the Bureau of Sports, Fisheries, and Wildlife it became necessary or desirable to effect control of the coyote? Would this preclude that action unless the Secretary certified that the use of the coyote getter was to protect the endangered species?

Mr. TUNNEY. I do not know the classification of the Elk Refuge Commission. It is clear that if it involved any lands that were being acquired under this legislation—

Mr. HANSEN. These lands have been acquired first, partly by gift. The Izaak Walton League many years ago made a grant and, from 1914 forward, the Federal Government through different measures has added to the refuge, and by purchase.

Does that answer the Senator's question?

Mr. NELSON. I am not sure it does. If the sanctuary has been created or the lands acquired for the purpose of creating a sanctuary or a wildlife habitat for an endangered species, very clearly you could not use chemical poisons on that land except upon authorization of the Secretary who would make the finding in the amendment.

I assume it would apply to the elk land referred to, but I do not know what classification they are under.

Mr. HANSEN. My purpose in asking the question is to try to have a better understanding of the amendment. I have

posed a hypothetical question. I do not think for a moment this might happen, but sometimes in our enthusiasm it is easy to attain a certain objective that might tie our hands. The trumpeter swan found in that refuge were an endangered species. As far as I know, they are the only endangered species in the elk refuge. I do not think the elk refuge was established because the elk was endangered, but was an important wildlife species which deserved better year-around care than they were getting.

Mr. TUNNEY. Mr. President, I believe the Senator's amendment is designed to achieve a very desirable purpose but during the course of the hearings we never did have an opportunity to get testimony from any party with respect to chemical toxicants and the use of chemical toxicants on sanctuaries. Inasmuch as the Senator's amendment relates also to State sanctuaries and we would be imposing the will of the Secretary of the Interior on State officials as it relates to State sanctuaries. I think the matter should be subject to hearings.

Therefore, for the committee, I cannot accept the amendment.

Mr. NELSON. I would like to ask a question. Is there a similar bill under consideration in the other body?

Mr. TUNNEY. Yes. The House will be considering legislation.

Mr. NELSON. On this bill, or do they have a bill of their own?

Mr. TUNNEY. They have one of their own.

Mr. NELSON. Have they finished the hearings on that?

Mr. TUNNEY. Yes.

Mr. NELSON. In view of the Senator's objection, Mr. President, I will withdraw the amendment and if they have not acted on the House side, I will have further comment.

Mr. TUNNEY. I sympathize with the purpose of the Senator's amendment, but I do not see how we can include it without hearings.

Mr. NELSON. Mr. President, I withdraw the amendment.

The PRESIDING OFFICER. The amendment is withdrawn.

The bill is open to further amendment.

If there be no further amendment to be proposed, the question is on agreeing to the committee amendment, as amended, in the nature of a substitute.

The committee amendment, as amended, in the nature of a substitute was agreed to.

The bill was ordered to be engrossed for a third reading, and was read the third time.

Mr. ROTH. Mr. President, I am proud to lend my support to the Endangered Species Act of 1973, a long overdue piece of legislation. The time has come from us to recognize that more than one hundred species and subspecies of wildlife—fish, animals, and birds—as well as forms of plantlife, are being seriously threatened through hunting and trapping, and by man's encroachment on their natural habitats. I encourage support of S. 1983 because it refines previous legislation that this body

developed and passed in 1966 and expanded upon in 1969.

The President stated in his environmental message of February 8, 1972, that the existing law "simply does not provide the kind of management tools needed to act early enough to save a vanishing species." In effect, the present law prevents the Government from taking action until a species is virtually extinct. Often, by the time something is done, it is too late to reverse the trend. I support the provisions of this bill and urge your careful consideration. Especially notable in this legislation are its provisions to create a more flexible classification and declassification system, strict civil and criminal penalties, and its acknowledgement of migratory patterns and the need for international cooperation.

The people of Delaware who admire the graceful and inspiring flight of the few American bald eagles remaining in the State, who view with awe the migratory flight of geese, ducks, and swans, hope that the Senate will look favorably upon this measure.

Mr. DOMENICI. Mr. President, today we will vote on S. 1983—the Endangered Species Act of 1973—a bill which provides for the conservation, protection and propagation of now endangered species of fish and wildlife. If implemented, this legislation will save from extinction one of our more valuable natural resources.

In recent years, many citizens of the United States have come to view the various species of wildlife as environmental indicators for their State, and, in a larger context, for the world. These citizens consider wildlife a precious natural resource which, if husbanded and protected, will be one of the factors in our natural surroundings which will endure for generations to follow. These individuals—whether they live in New York City or Chama, N. Mex.—want to be assured that there exists abundance of wildlife "somewhere" in our Nation, as well as to be assured of its continued existence.

The beautiful State of New Mexico has fought hard, although in some cases not hard enough, to protect its environment and its endangered species. The people of my State share a feeling of pride in the fact that they continually strive to preserve the natural—they strive to prevent technology from overriding the natural resources of our State.

In terms of wildlife, there has always been an endangered species for both natural and manmade reasons. Natural population fluctuations of some species have diminished their number to such a low point that they were unable to generate a continued existence. Other species have become so highly specialized that any slight alteration of the habitat spelled doom for their continued existence—experts point out that this natural phenomenon continues today. However, in the "modern age" of man, many experts claim that the possible extinction of numerous species of wildlife has increased by a tremendous factor. In many cases, "progress" for man means threatening disaster or devastating decline for a major portion of our wildlife. I feel the

main thrust of our discussion on this legislation should be man's obvious detrimental effect on wildlife to the point of practically guaranteeing its extinction.

We are not here today to discuss individual blame but to plan as immediate solution to insure the life of our endangered species. The advance of man's civilization has proved to be costly to the natural environment. It is a fact that man has been the culprit in bringing certain species to the point of extinction; it would be a double indictment against humanity to ignore the present situation and allow the destruction of our resource of wildlife to continue.

How has man effected wildlife adversely? Some reasons are quite obvious and others more subtle. Many of our land-use practices have destroyed the delicate habitat necessary to maintain a healthy wildlife. Certain intensive agricultural practices, unconcerned with their harmful influence on wildlife, have brought various species to the brink of extinction. All of us in these Chambers have heard of the now infamous golden eagle killings in Colorado and Wyoming. While the golden eagle has been saved from extinction, it was through indiscriminate shooting and treatment that this species was almost lost. In New Mexico, the prairie dog towns have been so decimated that the rare and endangered black-footed ferret is nowhere to be seen. While most naturally harmful organochlorine pesticides have been banned, their effects have been detrimental to various wildlife species. Again, in New Mexico, the peregrine falcon is still trying to recover from DDT poisoning.

Also, man through commercial exploitation of a particular wildlife species has placed some animals in the endangered category. Most of you here today are aware of the disputes within the whaling industry which exist among other nations. While the legislation under consideration takes care of such problems within the United States territorial boundaries, we must additionally have a procedure to intervene in such international disputes where the existence of endangered species is at stake.

Under the provisions of this act, there exists various means of recovery that can be instituted on behalf of rare and endangered species. We must demand the continued protection of prime habitat and, where feasible, renew and refurbish deteriorated species. Through the Office of Endangered Species and other Federal agencies, and with the aid and coordination of the various States' fish and game agencies, innovative and intensive programs should be initiated for all endangered species; such management will result in beneficial effects for our wildlife. Finally, various programs of captive propagation would be beneficial for rare and endangered species in order that progeny raised in captivity could be used to replenish the wildlife population.

At the same time, our governmental agencies, in cooperation with biologists and interested citizens, should continue research on the rare and endangered wildlife of our Nation. Continued investigations should be made to determine the population fluctuations of the vari-

ous species. On the basis of a complete census, efforts should be made to determine which are the limiting factors at the present time and which factors in the future will affect the well-being of our wildlife resource.

Senate bill 1983 addresses itself to rare and endangered wildlife. This legislation is drafted to protect these species, and it suggests a number of ways by which this can be accomplished. Under the authority of the Secretaries of Interior and Commerce, any species which is considered rare or endangered shall be free from molestation by the threat of civil penalty. It also gives authority to the Secretaries to permit continued scientific research into the problems of endangered wildlife. With a broadening of our knowledge concerning the problems of endangered species, maybe we can turn the tide on the uncertain existence of many of these animals. I urge my colleagues in the Senate to support this legislation which will benefit the generations which follow us and our Nation as well.

Mr. PERCY. Mr. President, it is certainly encouraging to me that the Senate is about to move promptly and hopefully unanimously upon S. 1983, the Endangered Species Act of 1973. For too long there has been insufficient means to protect and preserve all the valuable species of wildlife that contribute so much to the quality of life as we know it. S. 1983 will provide the tools we need both to protect animals that are presently endangered and to take the necessary precautions so that additional species are not reduced to the endangered level.

Action in this field reflects both an increased awareness of man's place in the ecosystem and the healthy respect that that awareness must engender. I am pleased that the Senate will take positive action with the adoption of S. 1983 and I am confident that this legislation will go a long way toward preserving our valuable and unfortunately perishable wildlife.

It is my pleasure to report that the State of Illinois has taken a lead in the area of endangered species with the passage of vigorous legislation earlier this year and will have no trouble in complying with the new Federal regulations.

The PRESIDING OFFICER. The bill has been read the third time. The question now is, Shall it pass? On this question the yeas and nays have been ordered, and the clerk will call the roll.

The second assistant legislative clerk called the roll.

Mr. ROBERT C. BYRD. I announce that the Senator from Nevada (Mr. CANNON) is necessarily absent.

I further announce that the Senator from South Dakota (Mr. ABOUREZK) is absent on official business.

I also announce that the Senator from Mississippi (Mr. STENNIS) is absent because of illness.

I further announce that, if present and voting, the Senator from South Dakota (Mr. ABOUREZK) would vote "yea."

Mr. GRIFFIN. I announce that the Senator from Oklahoma (Mr. BELLMON)

is absent to attend the funeral of a friend.

The Senator from Utah (Mr. BENNETT) is necessarily absent.

The Senator from New Hampshire (Mr. CORTON) is absent because of illness.

The Senator from Maryland (Mr. BEALL) and the Senator from Arizona (Mr. GOLDWATER) are detained on official business.

The result was announced—yeas 92, nays 0, as follows:

[No. 322 Leg.]

YEAS—92

Aiken	Gravel	Montoya
Allen	Griffin	Moss
Baker	Gurney	Muskie
Bartlett	Hansen	Nelson
Bayh	Hart	Nunn
Bentsen	Hartke	Packwood
Bible	Haskell	Pastore
Biden	Hatfield	Pearson
Brock	Hathaway	Pell
Brooke	Helms	Percy
Buckley	Hollings	Proxmire
Burdick	Hruska	Randolph
Byrd	Huddleston	Ribicoff
Harry F., Jr.	Hughes	Roth
Byrd, Robert C.	Humphrey	Saxbe
Case	Inouye	Schweiker
Chiles	Jackson	Scott, Pa.
Church	Javits	Scott, Va.
Clark	Johnston	Sparkman
Cook	Kennedy	Stafford
Cranston	Long	Stevens
Curtis	Magnuson	Stevenson
Dole	Mansfield	Symington
Domenici	Mathias	Taft
Dominick	McClellan	Talmadge
Eagleton	McClure	Thurmond
Eastland	McGee	Tower
Ervin	McGovern	Tunney
Fannin	McIntyre	Weicker
Fong	Metcalf	Williams
Fulbright	Mondale	Young

NAYS—0

NOT VOTING—8

Abourezk	Bennett	Goldwater
Beall	Cannon	Stennis
Bellmon	Cotton	

So the bill (S. 1983) was passed, as follows:

S. 1983

An act to provide for the conservation, protection, restoration, and propagation of threatened and endangered species of fish, wildlife, and plants, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Endangered Species Act of 1973".*

DECLARATION OF POLICY

SEC. 2. (a) FINDINGS.—The Congress finds and declares that—

(1) various species of fish, wildlife, and plants are of esthetic, ecological, educational extinct as a consequence of economic growth and development untempered by adequate concern and conservation;

(2) other species of fish, wildlife and plants have been so depleted in numbers that they are in danger of or threatened with extinction;

(3) these species of fish, wildlife and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people;

(4) the United States has pledged itself as a sovereign state in the international community to conserve and protect to the extent practicable the various species of fish or wildlife and plants facing extinction, pursuant to—

(A) migratory bird treaties with Canada and Mexico;

(B) the Migratory and Endangered Bird Treaty with Japan;

(C) the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere;

(D) the International Convention for the Northwest Atlantic Fisheries;

(E) the International Convention for the High Seas Fisheries of the North Pacific Ocean;

(F) the Convention on International Trade in Endangered Species of Wild Fauna and Flora; and

(G) other international agreements.

(5) encouraging the States and other interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation, protection, restoration, and propagation programs which meet national and international standards is a key to meeting the Nation's international commitments and to better safeguarding, for the benefit of all citizens, the Nation's heritage in fish and wildlife.

(b) PURPOSES.—The Congress hereby declares that the purposes and policy of this Act are to—

(1) provide an effective means to conserve, protect, and restore the ecosystems upon which endangered and threatened species of fish or wildlife depend;

(2) provide a viable program for the conservation, protection, restoration, and propagation of endangered and threatened species;

(3) take all appropriate steps to implement the Nation's international commitments with respect to endangered and threatened fish or wildlife; and

(4) insure that all departments, agencies, and instrumentalities of the United States seek, within the scope of their authority and administrative jurisdiction, to protect endangered and threatened species.

DEFINITIONS

SEC. 3. As used in this Act—

(1) "Conservation" and "management" mean the collection and application of biological information for the purposes of increasing and maintaining the number of animals within species and populations of endangered and threatened species at the optimum carrying capacity of their habitat. Such terms include the entire scope of activities that constitute a modern scientific resources program, including, but not limited to, research, census, law enforcement, and habitat acquisition and improvement. Also included within these terms, when and where appropriate, is the protection, propagation, conservation and restoration of such species, including regulation and taking necessary to these ends.

(2) "Convention" means the Convention on International Trade in Endangered Species of Wild Fauna and Flora, signed on March 3, 1973, and the appendices thereto.

(3) "Endangered species" means any species of fish or wildlife which is in danger of extinction throughout all or a significant portion of its range, other than a species of the order Insectica determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.

(4) "Fish or wildlife" means any living member of the animal kingdom and the remains of any dead member of the animal kingdom, including, but not limited to, any mammal, fish, bird, amphibian, reptile, mollusk, crustacean, arthropod or other invertebrate, or any part, egg, or offspring of any such member, or any product produced from any part or parts of the remains of any such member.

(5) "Foreign commerce" includes any transaction—

(A) between persons within one foreign country;



(B) between persons in two or more foreign countries;

(C) between a person within the United States and a person in a foreign country; or

(D) between persons within the United States, where the fish or wildlife involved are moving in any country or countries outside the United States.

(6) "Import" means to land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, any place subject to the jurisdiction of the United States, whether or not such landing, bringing, or introduction constitutes an importation within the meaning of the customs laws of the United States.

(7) "Optimum carrying capacity" means the ability of a given habitat to support the optimum sustainable population of an endangered or in a healthy state without diminishing the ability of the habitat to continue that function threatened species.

(8) "Optimum sustainable population" means, with respect to any of endangered or threatened species, the number of such species which will result in the maximum productivity of the species, keeping in mind the optimum carrying capacity of the habitat and the health of the ecosystem of which they form a constituent part.

(9) "Person" means an individual, corporation, partnership, trust, association, or any other private entity, or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State or political subdivision thereof, or of any foreign government.

(10) "Plant" means any member of the plant kingdom, including seeds, roots, or other parts of any such member.

(11) "Secretary" means, except as otherwise provided, the Secretary of the Interior or the Secretary of Commerce in the same manner in which program responsibilities are vested under Reorganization Plan Numbered 4 of 1970. With respect to enforcement of the provisions of this Act and of the Convention, which pertain to the importation of plants, the term means the Secretary of Agriculture.

(12) "Species" includes any subspecies or other group of fish or wildlife of the same species or lesser taxa in common spatial arrangement that interbreed when mature.

(13) "State" means any State, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and the Trust Territory of the Pacific Islands.

(14) "State agency" means the State agency, department, board, commission, or other governmental entity which is responsible for the management and conservation of fish and wildlife resources within a State.

(15) "Take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

(16) "Threatened species" means any species of fish or wildlife which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

(17) "United States", when used in a geographical sense, includes all States.

#### DETERMINATION OF ENDANGERED OR THREATENED SPECIES

SEC. 4. (a) GENERAL.—The Secretary shall by regulation determine whether any fish or wildlife is an endangered or threatened species as a result of any of the following factors:

(1) the present or threatened destruction, modification, or curtailment of its habitat or range;

(2) overutilization for commercial, sporting, scientific, or educational purposes;

(3) disease or predation;

(4) the inadequacy of existing regulatory mechanisms; or

(5) other natural or manmade factors affecting its continued existence.

(b) BASIS FOR DETERMINATIONS.—(1) The determinations required by this section shall be made on the basis of the best scientific and commercial data available to the Secretary, including any recommendations that have been made by the Advisory Committee established under subsection (d) of this section and after consultation, as appropriate, with all interested persons and organizations, including affected or knowledgeable Federal, State, and foreign government agencies. In any case in which such determinations involve an indigenous species, the Secretary shall consult with and consider the recommendations of each State involved. In any case in which determinations involve a species which is normally found on the high seas, in lakes, or other waters off the coast of a State of which are customarily harvested by citizens of such a State, the Secretary shall consult with and consider the recommendations of each State involved. In any case in which such determinations involve a species which is normally found in a foreign country or countries or which is harvested from the ocean by citizens of such country or countries, the Secretary shall (where practicable) with the assistance of the Secretary of State, consult with and consider the recommendations of such country or countries.

(2) Fish or wildlife which have been designated as requiring protection from unrestricted commerce by any foreign country, or pursuant to any international agreement, shall receive special and full consideration by the Secretary to determine whether each is an endangered or a threatened species.

(c) LISTS.—(1) The Secretary shall publish in the Federal Register a list of all fish or wildlife determined by him by regulation to be endangered species and a list of all fish or wildlife determined by him by regulation to be threatened species. Such lists may be amended, modified, or revised periodically by regulation. Each list shall refer to each species of fish or wildlife named therein by scientific name and common name or names and shall specify the portion of its range over which it is endangered or threatened.

(2) The Secretary shall, upon the petition of an interested person under subsection 553(e) of title 5, United States Code, conduct a review of any listed or unlisted species of fish or wildlife proposed to be removed from or added to either of the lists published pursuant to paragraph (1) of this subsection, but only if he makes and publishes a finding that such person has presented substantial evidence which in his judgment warrants such a review.

(3) Any list of species of fish or wildlife determined to be threatened with extinction, by the Secretary of the Interior pursuant to the Endangered Species Conservation Act of 1969, which is in effect the day before the date of enactment of this Act shall be republished to conform to the appropriate classifications under this Act. Pending reclassification as endangered species or threatened species and republication, any species listed pursuant to the Act of 1969 shall be deemed an endangered species within the meaning of this Act. Such reclassification and republication shall not require a public hearing or comment under section 553 of title 5, United States Code.

(d) ADVISORY COMMITTEE.—(1) The Secretaries shall establish an Advisory Committee on Endangered and Threatened Species to consult with, advise, and make recommendations to him and to the States. The Advisory Committee shall consist of not more than eleven members including a Chairman who shall be appointed by the Secretary from lists of qualified individuals submitted by State fish and wildlife agency administrators, universities, nongovernmental organizations concerned with conservation, and scientific societies. Five of the members shall

be regularly employed by State governments or political subdivisions thereof. The terms of office shall be so arranged by the Secretary that each year at least three new members shall be appointed to fill vacancies caused by the expiration of terms of office.

(2) The Advisory Committee shall periodically, but not less than once each year, make recommendations to the Secretary with respect to removal from, addition to, or reclassification within the lists maintained pursuant to subsection (a) of this section, and may, with the approval of the Secretary, perform other functions in furtherance of the purposes of this Act. A member of the Advisory Committee who is not otherwise a Government employee may, in the discretion of the Secretary, receive not more than \$150 per diem when engaged in the actual performance of his duties. Each member may receive reimbursement for travel, subsistence, and other necessary expenses incurred in the performance of his duties.

(e) PROTECTIVE REGULATIONS.—Whenever the Secretary lists a species of fish or wildlife as a threatened species, pursuant to subsection (a) of this section, he shall issue such regulations as he deems necessary and advisable to provide for the conservation and management of such species. With respect to any threatened species, the Secretary may by regulation prohibit any act prohibited with respect to an endangered species under section 10(a) of this Act.

#### LAND ACQUISITION

SEC. 5. The Secretary shall establish and implement a program to conserve, protect, restore, and propagate fish or wildlife which are listed as endangered or threatened species pursuant to section 4 of this Act. To carry out such programs, the Secretary—

(a) shall utilize as appropriate the land acquisition and other authorities conferred upon him under the Migratory Bird Conservation Act, the Fish and Wildlife Act of 1956, and the Fish and Wildlife Coordination Act;

(b) may acquire by purchase, donation, or otherwise any lands, waters, or interests therein necessary for the purpose of conserving, protecting, restoring, or propagating any endangered or threatened species. Such authority shall be in addition to any other land acquisition authority vested in him;

(c) may use funds made available under the Land and Water Conservation Fund Act of 1965 or under this Act to acquire such lands, waters, or interests therein.

#### COOPERATION WITH THE STATES

SEC. 6. (a) GENERAL.—In carrying out the program authorized by this Act, the Secretary shall cooperate to the maximum extent practicable with the States. In addition to all other obligations, the Secretary shall consult with the affected State before the acquisition of any lands, waters, or interests therein for the purpose of conserving, protecting, restoring, or propagating any endangered or threatened species.

(b) MANAGEMENT AGREEMENTS.—The Secretary may enter into an agreement or agreements with any State for the administration and management of any area established for the conservation and management of an endangered or a threatened species. Any revenues derived from the administration of such areas under such agreements shall be subject to section 401 of the Act of June 15, 1935 (16 U.S.C. 715s).

(c) FINANCIAL ASSISTANCE.—The Secretary is authorized to enter into a cooperative agreement in accordance with this subsection to provide financial assistance to any State which establishes and maintains an adequate and active program for the conservation and management of endangered and threatened species. Before the Secretary may enter into or renew such a cooperative agreement to provide financial assistance to a State, he shall make, justify, and publish in the Fed-

eral Register a finding that such agreement would further the policy of this Act and that such State has a program under which—

(1) the State agency has statutory and regulatory authority and administrative jurisdiction to manage and protect any species of fish or wildlife which is determined by such agency or the Secretary to be endangered or threatened;

(2) the State has established a State plan, including a management program under the State agency, for all species of resident fish or wildlife which are deemed by the Secretary to be endangered or threatened, and has furnished a copy of such plan and program together with all pertinent details, information, and data requested to the Secretary;

(3) the State agency during the first year of the existence of such agreement—

(A) will issue protective regulations;

(B) will employ sufficient trained and qualified personnel; and

(C) will maintain investigation, enforcement, and public education programs, which are adequate, in the Secretary's judgment, for the conservation and management of species of endangered and threatened fish or wildlife;

(4) the State agency is authorized and plans to conduct studies to determine the status and requirements for survival of species of resident fish or wildlife and agrees to transmit a copy of the findings of such studies to the Secretary;

(5) the State agency is authorized and plans to establish programs, including the acquisition of lands, waters, or interests therein, for the conservation and management of endangered and threatened species; and

(6) provision is made for public participation in designating species of resident fish or wildlife as endangered or threatened.

(d) ALLOCATION OF FUNDS.—(1) Funds appropriated for financial assistance pursuant to subsection (c) of this section shall be available to the Secretary for allocation to the States under cooperative agreements. The purposes for which such funds may be used include, but are not limited to, conservation and management. The Secretary shall allocate appropriated funds to such States upon the basis of—

(A) the international commitments of the United States to protect endangered or threatened species;

(B) the readiness of a State to proceed with a conservation and management program consistent with the objectives and purposes of this Act;

(C) the number of endangered and threatened species within a State;

(D) the potential for restoring endangered and threatened species within a State; and

(E) the relative urgency to initiate a program to restore and protect an endangered or threatened species in terms of the survival of the species.

Funds allocated to a State but unexpended or unobligated at the close of the fiscal year shall remain available for expenditure by such State until the close of the succeeding fiscal year. Any funds remaining unobligated or unexpended at the close of the second fiscal year shall remain available to the Secretary for the purpose of this section.

(2) Each cooperative agreement between a State and the Secretary shall provide for—

(A) the actions to be taken by the Secretary and the State;

(B) the benefits that are expected to be derived in connection with preservation and restoration of endangered or threatened species;

(C) the estimated cost of these actions; and

(D) the share of such costs to be borne by the Federal Government and by the States, except that—

(1) the Federal share of such program costs shall not exceed 50 per centum of the esti-

mated program costs stated in the agreement; and

(11) the Federal share may be increased to 66⅔ per centum whenever two or more States, having a common interest in a program that the Secretary deems to meet the criteria of paragraph (1) of this subsection, enter jointly into an agreement with the Secretary.

The Secretary may, in his discretion, and under such rules and regulations as he may prescribe, advance funds to the State for financing the United States pro rata share agreed upon in the cooperative agreement. For the purposes of this section, the non-Federal share may, in the discretion of the Secretary, be in the form of real or personal property, the value of which will be determined by the Secretary, as well as money.

(3) The Secretary is authorized to issue such regulations as may be appropriate to carry out the provisions of this section with respect to financial assistance to States.

(4) For the purposes of this section, there is authorized to be appropriated through the fiscal year ending June 30, 1977, not to exceed \$10,000,000.

(e) PERIODIC REVIEW.—The finding made under subsection (c) of this section and any action taken by the Secretary under this section shall be subject to his periodic review, including the consideration of comment from interested persons, at no greater than annual intervals. Upon ninety days' notice in writing to the affected State, the Secretary may terminate in his discretion any cooperative agreement entered into under this section.

(f) STATE ACTION PERMITTED.—Nothing in this Act shall be construed as superseding or limiting the power of any State or political subdivision thereof to enact legislation or regulations more restrictive than or consistent with the provisions of this Act with respect to an endangered or a threatened species: *Provided*, That any State law or regulation regarding the import or export of or the interstate or foreign commerce in an endangered species listed pursuant to section 4 of this Act is void to the extent that it may effectively permit what is prohibited by this Act or its implementing regulations, or prohibit what is authorized pursuant to an exemption or permit provided for in this Act or its implementing regulations. This Act shall not otherwise be construed to void any State law or regulation which is intended to conserve and manage migratory, resident, or introduced fish or wildlife, or to permit or prohibit sale of such fish or wildlife.

#### INTERAGENCY COOPERATION

SEC. 7. The Secretary shall review all programs administered by him and utilize such programs in furtherance of the policy of this Act. All other departments, agencies, and instrumentalities of the Federal Government shall, in consultation with and with the assistance of the Secretary—

(a) carry out such programs as are practicable for the protection of species listed, pursuant to section 4 of this Act, as endangered or threatened;

(b) take such action as is necessary to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of any endangered or threatened species, or result in the destruction or modification of any habitat of such species which is determined by the Secretary, after consultation to the extent appropriate and necessary with affected States, to be a critical habitat of such species.

#### INTERNATIONAL COOPERATION

SEC. 8. (a) FINANCIAL ASSISTANCE.—As a demonstration of the commitment of the United States to the worldwide protection of endangered and threatened species, the President may, subject to the provisions of section 1415 of the Supplemental Appropriation Act, 1953 (31 U.S.C. 724), use foreign

currencies accruing to the United States Government under the Agricultural Trade Development and Assistance Act of 1954 or any other law to provide to any foreign country (with its consent) assistance in the development and management of programs in that country which the Secretary determines to be necessary or useful for the conservation, protection, restoration, or propagation of any endangered or threatened species listed by the Secretary pursuant to section 4 of this Act: *Provided*, That no funds other than foreign currencies available for expenditure only within such foreign country shall be used pursuant to this section. The President shall provide assistance (which includes, but is not limited to, the acquisition, by lease or otherwise, of lands, waters, or interests therein) to foreign countries under this section upon such terms and conditions as he deems appropriate.

(b) ENCOURAGEMENT.—In order to carry out further the provisions of this Act, the Secretary, with the assistance of the Secretary of State, shall encourage—

(1) foreign countries to provide for the protection, conservation, restoration, or propagation of fish or wildlife, including endangered and threatened species listed pursuant to section 4 of this Act;

(2) the entering into of bilateral or multilateral agreements for foreign countries to provide for such protection, conservation, restoration, or propagation; and

(3) foreign persons, who directly or indirectly take fish or wildlife in foreign countries or on the high sea for importation into the United States for commercial or other purposes, to develop and carry out, with such assistance as he may provide, conservation practices designed to enhance such fish, wildlife and plants and their habitat.

(c) PERSONNEL.—After consultation with the Secretary of State, the Secretary may—

(1) assign or otherwise make available any officer or employee of his department for the purpose of cooperating with foreign countries and international organizations in developing personnel resources and programs which promote the protection, conservation, restoration, or propagation of fish or wildlife; and

(2) conduct or provide financial assistance for the educational training of foreign personnel, in this country or abroad, in fish, wildlife or plant management, research, and law enforcement, and to render professional assistance abroad in such matters.

(d) INVESTIGATIONS.—After consultation with the Secretary of State and the Secretary of the Treasury, as appropriate, the Secretary may conduct or cause to be conducted such law enforcement investigations and research abroad as he deems necessary to carry out the purposes of this Act.

(e) CONVENTION IMPLEMENTATION.—The President is authorized and directed to designate appropriate agencies to act as the Management Authority or Authorities and the Scientific Authority or Authorities pursuant to the Convention. The agencies so designated shall thereafter be authorized to do all things assigned to them under the Convention, including the issuance of permits and certificates. The agency designated by the President to communicate with other parties to the Convention and with the Secretariat shall also be empowered, in consultation with the State Department, to act on behalf of and represent the United States in all regards as required by the Convention.

#### REGULATIONS, PROCEDURE, AND JUDICIAL REVIEW

SEC. 9. (a) REGULATIONS.—The Secretary shall publish any regulations proposed under this Act in the Federal Register at least sixty days prior to the time when such regulations shall become final, except that in case of an emergency the Secretary may publish such regulations not less than thirty

days prior to the time when such regulations shall become final if at the same time he publishes in the Federal Register detailed reasons why emergency action is necessary. The Secretary shall also publish in the Federal Register a notice of all petitions received pursuant to this Act and, if such petition is denied, his reasons therefor. Such notice shall identify the purpose of the petition and include a statement of the availability of any data submitted in support of such petition. If any person adversely affected by a proposed regulation files objections and requests a public hearing within forty-five days of the date of publication of the proposed regulation, the Secretary shall grant such request. If such public hearing is held, final regulations shall not be promulgated by the Secretary until after the conclusion of such hearing. All public hearings authorized by this subsection shall consist of the oral and written presentation of data or arguments in accordance with such conditions or limitations as the Secretary may make applicable thereto. Proposed and final regulations issued under this Act shall set forth findings of fact on which the regulations are based and shall state the relationship of such findings to the regulations issued.

(b) **PROCEDURE.**—Except as expressly modified by this section, the provisions of the Administrative Procedure Act (5 U.S.C. 551 et seq.) shall apply to proceedings conducted by the Secretary under this Act. Provided, That the provisions of this section shall not apply to the extent necessary to permit emergency action by the Secretary. Notice of and reasons for such action shall be published prior to such action in the Federal Register.

(c) **JUDICIAL REVIEW.**—(1) Any judicial review of final regulations promulgated under this Act and final actions under section 5(c) of this Act shall be in accordance with sections 701-706 of title 5, United States Code, except that—

(A) with respect to regulations promulgated under section 4 or 6 of this Act, the findings of the Secretary as to the facts shall be sustained if based upon substantial evidence on the record considered as a whole; and

(B) with respect to relief pending review, no stay of an action may be granted unless the reviewing court determines that the party seeking such stay—

(i) is likely to prevail on the merits in the review proceeding; and

(ii) will suffer irreparable harm pending such proceeding.

(2) If the party seeking judicial review applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court either that—

(A) the information is material and was not available at the time of the proceeding before the Secretary; or

(B) failure to include such evidence in the proceeding was an arbitrary or capricious act of the Secretary, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Secretary, and to be adduced upon the hearing, in such manner and upon such terms and conditions as the court may deem proper. The Secretary may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken, and he shall file with the court such modified or new findings and his recommendation, if any, for the modification or setting aside of his original order.

(d) **AUDIT.**—(1) Each recipient of Federal assistance under this Act, pursuant to grants, subgrants, contracts, subcontracts, loans, or other arrangements, entered into other than by formal advertising, and which are otherwise authorized by this Act, shall keep such records as the Secretary shall prescribe, including records which fully disclose the

amount and disposition by such recipient of the proceeds of such assistance, the total cost of the project or undertaking in connection with which such assistance is given or used, the amount of that portion of the cost of the project or undertaking supplied by other sources, and such other records as will facilitate an effective audit.

(2) The Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, shall, until the expiration of three years after completion of the project or undertaking referred to in paragraph (1) of this subsection of this section, have access for the purpose of audit and examination to any books, documents, papers, and records of such receipts which in the opinion of the Secretary or the Comptroller General may be related or pertinent to the grants, subgrants, contracts, subcontracts, loans or other arrangements referred to in subsection (a).

#### UNLAWFUL CONDUCT

SEC. 10. (a) **PROHIBITED ACTS.**—Except as provided in section 11 of this Act, it is unlawful for any person subject to the jurisdiction of the United States to—

(1) import into, or export from, the United States any endangered species which has been listed pursuant to section 4 of this Act;

(2) take any such species within the United States or in the territorial sea of the United States or upon the high seas;

(3) possess, sell, deliver, carry, transport, ship, or receive, by any means whatever, any such species which are taken in violation of paragraph (2) of this subsection;

(4) deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and for commercial purposes, any such species;

(5) sell, distribute, or offer for sale in foreign commerce, interstate commerce, or activity affecting interstate commerce any endangered species of fish or wildlife;

(6) attempt to commit, solicit another to commit, or cause to be committed, any act prohibited by paragraphs (1) through (5) of this subsection;

(7) engage in any trade in any specimens of fish, wildlife, or plants, contrary to the provisions of the Convention, or possess any specimens traded contrary to the provisions of the Convention, including the definitions in article I therein;

(8) violate any regulation which is promulgated by the Secretary pursuant to section 4(e) of this Act; or

(9) import into or export from the United States except at a port or ports designated by the Secretary, any fish or wildlife, except nonendangered and nonthreatened shellfish and fishery products which are imported or exported for human or animal consumption, or fish or wildlife taken for recreational purposes pursuant to applicable Federal or State laws and regulations in waters under United States jurisdiction or on the high seas.

To facilitate enforcement of this paragraph and to reduce the costs of enforcement, the Secretary, with the approval of the Secretary of the Treasury and after notice and opportunity for public hearing, may, by regulation, designate ports and change such designations. Upon such terms and conditions as he may prescribe, the Secretary may permit such importation at non-designated ports in the interest of the health or safety of the fish or wildlife or for any other reasons he deems appropriate. Any port designated by the Secretary of the Interior under the authority of section 4(d) of the Act of December 5, 1969 (16 U.S.C. 666cc-4(d)), shall, if such designation is in effect on the day before the date of the enactment of this Act, be deemed to be a port designated by the Secretary under this paragraph until such time as the Secretary otherwise provides.

(b) **SIMILARITY OF APPEARANCE CASES.**—The Secretary may, by regulation, and to the extent he deems advisable, treat any species of fish or wildlife as an endangered or threatened species even though it is not listed pursuant to section 4 of this Act if he finds that—

(A) such species so closely resembles in appearance, at the point in question, a species which has been listed pursuant to such section that enforcement personnel would have substantial difficulty in attempting to differentiate between the listed and unlisted species;

(B) the effect of this substantial difficulty is an additional threat to an endangered or threatened species; and

(C) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of this Act.

(c) **SPECIES HELD IN CAPTIVITY OR CONTROLLED ENVIRONMENT.**—The provisions of this section shall not apply to any species held in captivity or in a controlled environment on the effective date of this Act if the purposes of such holding are not contrary to the purposes of this act.

#### EXCEPTIONS

SEC. 11. (a) **GENERAL.**—Upon a finding that the excepted conduct will not adversely affect the regenerative capacity of the involved species in a significant portion of its range or habitat or otherwise affect the survival of the wild population of such species, and upon such terms and conditions as he may prescribe, the Secretary may issue permits authorizing the importation, exportation, taking, or transportation, by persons found to be qualified, of any fish or wildlife which is listed as an endangered or threatened species pursuant to section 4 of this act for—

(1) for scientific purposes in furtherance of the purposes of this act; or

(2) to enhance the propagation or survival of the affected species including the propagation of such species in captivity or in a controlled habitat.

(b) (1) **HARDSHIP.**—The Secretary may except from the application of section 10(a) of this Act any person if the failure to grant such exception will cause undue economic hardship: *Provided*, That such exception shall be granted any non-Native resident of an Alaska Native village unless such resident is found by the Secretary not to be primarily dependent upon the taking of fish and wildlife for consumption or use in a Native community or for creating and selling authentic Native articles of handicrafts. The extent and duration of such exception shall be such as the Secretary deems appropriate: *Provided*, No such exception shall be for a duration of more than one year from the date of publication in the Federal Register of notice of proposed listing of the involved species. No exception shall apply to a quantity of fish or wildlife in excess of that specified by the Secretary. No such exception shall be granted unless such person, except non-Native residents of Alaska Native villages who are primarily dependent upon the taking of fish and wildlife for subsistence purposes, applies to the Secretary in writing and furnishes with such application such information as the Secretary may require to prove hardship. The one year period for those species of fish and wildlife which were listed by the Secretary as endangered prior to the effective date of this Act shall expire in accordance with the terms of section 3 of the Act of December 5, 1969 (83 Stat. 275). No such exemption may be granted for the importation or exportation of a specimen listed in appendix I of the Convention which is to be used for primarily commercial purposes.

(2) As used in this subsection, the term "undue economic hardship" shall include, but not be limited to:

(A) Substantial economic loss resulting

from inability caused by this Act to perform contracts with respect to species of fish and wildlife entered into prior to the date of publication in the Federal Register of a notice of a proposed listing of such species as an endangered or threatened species.

(B) Substantial economic loss to persons who, for the year prior to the listing of a species under this Act derived a substantial portion of their income from the lawful taking of any listed species which taking would be made unlawful under this Act; or

(C) Curtailment of subsistence taking made unlawful under this Act by persons (i) not reasonably able to secure other sources of subsistence; and (ii) dependent to a substantial extent upon hunting and fishing for subsistence; and (iii) who must engage in such curtailed taking for subsistence purposes.

(3) The Secretary may make further requirements for a showing of undue economic hardship as he deems fit. Exceptions granted under this section may be limited by the Secretary in his discretion as to time, area, or other factor of applicability.

(c) PROCEDURE.—(1) The Secretary shall publish a notice in the Federal Register of each application for an exception. Each notice shall invite the submission from interested parties, within thirty days after the date of the notice, of written data, views, or arguments with respect to the application. Information received by the Secretary as a part of any application shall be available to the public as a matter of public record at every stage of the proceeding.

(2) The Secretary may grant exceptions under subsections (a) and (b) of this section only if he finds, and publishes such finding in the Federal Register, that such exceptions were applied for in good faith and if granted and exercised will not operate to the disadvantage of such endangered or threatened species and will be consistent with the policy of this Act.

(d) ALASKA NATIVES.—(1) The provisions of this Act shall not apply with respect to the taking of any endangered or threatened species by any Indian, Aleut, or Eskimo who is an Alaskan native who resides in Alaska if such taking is for the purpose of consumption or use in a native community or for the purpose of selling or creating for sale in interstate commerce authentic native articles of handicrafts and clothing: *Provided*, That in each case such taking is not accomplished in a wasteful manner. As used in this paragraph—

(A) "consumption or use in a native community" includes selling any edible portion of fish or wildlife in native villages and towns in Alaska for native consumption within native villages or towns; and

(B) "authentic native articles of handicrafts and clothing" means items composed wholly or in some significant respect of natural materials, and which are produced, decorated, or fashioned in the exercise of traditional native handicrafts without the use of pantographs, multiple carvers, or other mass copying devices. Traditional native handicrafts include, but are not limited to, weaving, carving, stitching, sewing, lacing, beading, drawing, and painting.

(2) Notwithstanding the provisions of paragraph (1) of this subsection, whenever the Secretary determines that any species of fish or wildlife which is subject to taking by Indians, Aleuts, or Eskimos is an endangered or threatened species, and that such taking materially and negatively affects the threatened and endangered species, he may prescribe regulations upon the taking of such species by any such Indian, Aleut, or Eskimo. Such regulations may be established with reference to species, geographical description of the area included, the season for taking, or any other factors related to the reason for establishing such regulations and consistent with the policy of this Act. Such

regulations shall be prescribed after a notice and hearings in the affected judicial districts of Alaska and as otherwise required by section 103 of the Marine Mammal Protection Act of 1972, and shall be removed as soon as the Secretary determines that the need for their imposition has disappeared: *Provided*, That no such regulation shall be established which is in contravention of any provision of the Marine Mammal Protection Act of 1972.

#### PENALTIES AND ENFORCEMENT

SEC. 12. (a) CIVIL PENALTY.—(1) Any person who—

(A) knowingly violates any provision of this Act or any regulation or permit issued under this Act, which prohibits the taking, importing, exporting, shipping, receiving, or otherwise moving in interstate or foreign commerce of any endangered or threatened species of fish or wildlife, or commits any act made unlawful under section 10(a) of this Act, may be assessed a civil penalty by the Secretary of not more than \$10,000 for each violation;

(B) commits any act made unlawful under section 10(a) of this Act, or violates any other provision of this Act, or any regulation or permit issued under this Act, may be assessed a civil penalty by the Secretary of not more than \$1,000 for each such violation.

No penalty shall be assessed unless such person is given notice and opportunity for a hearing with respect to such violation. Each prohibited act is a separate violation. Any such civil penalty may be compromised by the Secretary. Upon any failure to pay a penalty assessed under this subsection, the Secretary may by his own attorneys institute a civil action in a district court of the United States for any district in which such person is found, resides, or transacts business to collect the penalty and such court shall have jurisdiction to hear and decide any such action. The court shall hear such action solely on the record made before the Secretary and shall sustain his action if it is supported by substantial evidence on the record considered as a whole.

(2) Hearings held during proceedings for the assessment of civil penalties authorized by paragraph (1) of this subsection shall be conducted in accordance with section 554 of title 5, United States Code. The Secretary may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and may administer oaths. Witnesses summoned shall be paid the same fees and mileage that are paid to witnesses in the courts of the United States. In case of contumacy or refusal to obey a subpoena served upon any person pursuant to this paragraph, the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Secretary or to appear and produce documents before the Secretary, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(b) CRIMINAL VIOLATION.—(1) Any person who knowingly and willfully violates any provision of this Act, or of any regulation or permit issued thereunder, shall, upon conviction, be fined not more than \$20,000 or imprisoned for not more than one year, or both.

(2) The head of any Federal agency which has issued a lease, license, permit, or other agreement authorizing the use of Federal lands, including grazing of domestic livestock, to any person who is convicted under paragraph (1) of this subsection may immediately modify, suspend, or revoke such lease, license, permit, or other agreement. The

Secretary may suspend, cancel, or refuse to issue for a period of up to one year Federal hunting or fishing permits or stamps with respect to any person who is convicted under paragraph (1) of this subsection. The United States shall not be liable to pay any compensation, reimbursement, or damages in connection with any such modification, suspension, or revocation made pursuant to this section of any lease, license, permit, stamp, or other agreement.

(c) REWARDS.—Upon the recommendation of the Secretary, the Secretary of the Treasury is authorized to pay an amount equal to one-half of the civil penalty or fine paid, but not to exceed \$2,500, to any person who furnishes information which leads to a finding of civil violation or a conviction of a criminal violation of any provision of this Act or any regulation or permit issued thereunder. Any officer or employee of the United States or of any State or local government who furnishes information or renders service in the performance of his official duties shall not be eligible for payment under this section.

(d) ENFORCEMENT.—(1) The provisions of this Act and any regulations or permits issued under this Act shall be enforced by the Secretary, the Secretary of the Treasury, or the Secretary of the Department in which the Coast Guard is operating, or all Secretaries. Each such Secretary may utilize, by agreement, with or without reimbursement, the personnel, services, and facilities of any other Federal agency or any State agency for purposes of enforcing this Act.

(2) The judges of the district courts of the United States and the United States magistrates may, within their respective jurisdictions, upon proper oath or affirmation showing probable cause, issue such warrants or other process as may be required for enforcement of this Act and any regulation issued thereunder.

(3) Any person authorized by the Secretary, the Secretary of the Treasury, or the Secretary of the Department in which the Coast Guard is operating, in furtherance of the enforcement of this Act may execute and serve any arrest warrant, search warrant, or other warrant of civil or criminal process issued by any officer or court of competent jurisdiction. A person so authorized may search and seize, with or without a warrant, to the extent authorized by law. Any fish, wildlife, property, or item so seized shall be held by any person authorized by the Secretary, the Secretary of the Treasury, or the Secretary of the Department in which the Coast Guard is operating pending disposition of civil or criminal proceedings, or the institution of an action in rem for forfeiture of such fish, wildlife, property, or item pursuant to paragraph (4) of this subsection, except that the Secretary may, in lieu of holding such fish, wildlife, property, or item, permit the owner or consignee to post a bond or other surety satisfactory to the Secretary.

(4) All fish or wildlife, or plants taken, possessed, sold, purchased, offered for sale or purchase, transported, delivered, received, carried, shipped, exported or imported contrary to the provisions of this Act, any regulation issued under this Act, or any permit issued thereunder, and all guns, traps, nets, and other equipment, vessels, vehicles, aircraft, and other means of transportation used to aid the taking, possessing, selling, purchasing, offering for sale or purchase, transporting, delivering, receiving, carrying, shipping, exporting or importing of any fish or wildlife, or plants in violation of this Act, any regulation made pursuant thereto, or any permit issued thereunder shall be subject to forfeiture to the United States.

(5) All provisions of law relating to the seizure, forfeiture, and condemnation of a vessel for violation of the customs laws, the disposition of such vessel or the proceeds from the sale thereof, and the remission or mitigation of such forfeiture, shall apply to

the seizures and forfeitures incurred, or alleged to have been incurred, under the provisions of this Act, insofar as such provisions of law are applicable and not inconsistent with the provisions of this Act. The powers, rights, and duties conferred or imposed by the customs laws upon any officer or employee of the Treasury Department shall, for purposes of this Act, be exercised or performed by the Secretary or by such persons as he may designate.

(e) **REGISTRATION.**—(1) Any person who engages to any extent in business as an importer of fish or wildlife must register with the Secretary of the Treasury his name and the address of each place of business at which, and all trade names under which, he conducts such business.

(2) Any person required to register with the Secretary of the Treasury under paragraph (1) of this subsection shall—

(A) keep such records as will fully and correctly disclose each importation or exportation of fish or wildlife except nonendangered and nonthreatened shell fish or fishery products which are imported or exported for human or animal consumption or recreational purposes, made by him and the subsequent disposition made by him with respect to such fish or wildlife; and

(B) at all reasonable times upon notice by a duly authorized representative of the Secretary, afford such representative access to his places of business, an opportunity to examine his inventory of imported fish or wildlife and the records required to be kept under subparagraph (A) of this paragraph and to copy such records.

(3) The Secretary of the Treasury, after consultation with the Secretary, shall prescribe such regulations as are necessary and appropriate to carry out the purposes of this subsection.

(f) **ENFORCEMENT REGULATIONS.**—(1) The Secretary, the Secretary of the Treasury, and the Secretary of the Department in which the Coast Guard is operating, are authorized to promulgate such regulations as may be appropriate to enforce this Act, and to charge reasonable fees for expenses to the Government connected with permits authorized by this Act, including processing applications and reasonable inspections, and the transfer, board, handling, or storage of fish, wildlife, or plants and evidentiary items seized and forfeited under this Act. All fees collected pursuant to this subsection shall be deposited in the Treasury to the credit of the appropriation which is current and chargeable for the cost of furnishing the services. Appropriated funds may be expended pending reimbursement from parties in interest.

(g) **CITIZEN SUITS.**—(1) Except as provided in paragraph (2) of this subsection, any person may commence a civil suit on his own behalf to enjoin any person, including the United States and any other governmental instrumentality or agency (to the extent permitted by the eleventh amendment to the Constitution), who is alleged to be in violation of any provision of this Act or regulation issued under the authority thereof. The district courts shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce any such provision or regulation, as the case may be.

(2) No action may be commenced—

(A) prior to sixty days after written notice of the violation has been given to the Secretary, and to any alleged violator of any such provision or regulation;

(B) if the Secretary has commenced action to impose a penalty pursuant to subsection (a) of this section; or

(C) if the United States has commenced and is diligently prosecuting a criminal action in a court of the United States or a State to redress a violation of any such provision or regulation.

(3)(A) Any suit under this subsection

may be brought in the judicial district in which the violation occurs.

(B) In any such suit under this subsection in which the United States is not a party, the Attorney General, at the request of the Secretary, may intervene on behalf of the United States as a matter of right.

(4) The court, in issuing any final order in any suit brought pursuant to paragraph (1) of this subsection may award costs of litigation (including reasonable attorney and expert witness fees) to any party, whenever the court determines such award is appropriate.

(5) The injunctive relief provided by this subsection shall not restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any standard or limitation or to seek any other relief (including relief against the Secretary or a State agency).

(h) **COORDINATION.**—The Secretary of Agriculture and the Secretary shall provide for appropriate coordination of the administration of this Act with the administration of the animal quarantine laws (21 U.S.C. 101-105, 111-135b, and 612-614) and section 306 of the Tariff Act of 1930 (19 U.S.C. 1306). Nothing in this Act or any amendment made by this Act, shall be construed as superseding or limiting in any manner the functions of the Secretary of Agriculture under any other law relating to prohibited or restricted importations or possession of animals and other articles. No proceeding or determination under this Act shall preclude any proceeding or be considered determinative of any issue of fact or law in any proceeding under any Act administered by the Secretary of Agriculture. Nothing in this Act shall be construed as superseding or limiting in any manner the functions and responsibilities of the Secretary of the Treasury under the Tariff Act of 1930, including, but not limited to, section 527 of such Act (19 U.S.C. 1527), relating to the importation of wildlife taken, killed, possessed, or exported to the United States in violation of the laws or regulations of a foreign country.

#### ENDANGERED PLANTS

SEC. 13. The Secretary of Agriculture, in conjunction with other affected agencies, is authorized and directed to review species of plants which are endangered or threatened, and methods of providing adequate protection including legislation for such species. He shall report the results of such review to Congress, not later than one year after the date of enactment of this Act. For purposes of this section, there is authorized to be appropriated not to exceed \$250,000.

#### CONFORMING AMENDMENTS

SEC. 14. (a) Section 4(c) of the Act of October 15, 1966 (80 Stat. 928, 16 U.S.C. 668dd(c)), is further amended by revising the second sentence thereof to read as follows: "With the exception of endangered and threatened species listed by the Secretary pursuant to section 4 of the Endangered Species Act of 1973 in States wherein a cooperative agreement does not exist pursuant to section 6(c) of such Act nothing in this Act shall be construed to authorize the Secretary to control or regulate hunting or fishing of resident fish and wildlife on lands not within the System."

(b) Section 10(a) of the Migratory Bird Conservation Act (45 Stat. 1224, 16 U.S.C. 715(a)) and section 401(a) of the Act of June 15, 1935 (49 Stat. 383, 16 U.S.C. 715a(a)) are each amended by striking out "threatened with extinction," and inserting in lieu thereof the following: "listed pursuant to section 4 of the Endangered Species Act of 1973 as endangered or threatened species."

(c) Section 6(a)(1) of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 4601-9(a)(1)) is amended by striking out:

"THREATENED SPECIES. — For any national area which may be authorized for the pres-

ervation of species of fish or wildlife that are threatened with extinction," and inserting in lieu thereof the following:

"ENDANGERED AND THREATENED SPECIES.— For lands, waters, or interests therein, the acquisition of which is authorized under section 5 of the Endangered Species Act of 1973, needed for the purpose of conserving, protecting, restoring, or propagating endangered or threatened species of fish, wildlife, or plants."

(d) The first sentence of section 2 of the Act of September 28, 1962 (76 Stat. 653; 16 U.S.C. 406k-1), is amended to read as follows:

"SEC. 2. The Secretary is authorized to acquire areas of land, or interests therein, which are suitable for—

"(1) incidental fish- and wildlife-oriented recreational development,

"(2) the protection of natural resources,

"(3) the conservation of endangered or threatened species listed by the Secretary pursuant to section 4 of the Endangered Species Act of 1973, or

"(4) carrying out two or more of the purposes set forth in paragraphs (1) through (3) of this section, and are adjacent to, or within, the said conservation areas, except that the acquisition of any land or interest therein pursuant to this section shall be accomplished only with such funds as may be appropriated therefor by the Congress or donated for such purposes, but such property shall not be acquired with funds obtained from the sale of Federal migratory bird hunting stamps."

(e) The Marine Mammal Protection Act of 1972 (16 U.S.C. 1361-1407) is amended—

(1) by striking out "Endangered Species Conservation Act of 1969" in section (1) (B), thereof and inserting in lieu thereof the following: "Endangered Species Act of 1973";

(2) by striking out "pursuant to the Endangered Species Conservation Act of 1969" in section 101(a)(3)(B) thereof and inserting in lieu thereof the following: "or threatened species pursuant to the Endangered Species Act of 1973";

(3) by striking out "endangered under the Endangered Species Conservation Act of 1969" in section 102(b)(3) thereof and inserting in lieu thereof the following: "an endangered or a threatened species pursuant to the Endangered Species Act of 1973"; and

(4) by striking out "Endangered Species List, authorized by the Endangered Species Conservation Act of 1969," in section 202(a) (6) thereof and inserting in lieu thereof the following: "endangered species list and threatened species list published pursuant to section 4(c)(1) of the Endangered Species Act of 1973".

(f) Section 2(1) of the Federal Environmental Pesticide Control Act of 1972 (Public Law 92-516) is amended by striking out the words "by the Secretary of the Interior under Public Law 91-135" and inserting in lieu thereof the words "or threatened by the Secretary pursuant to the Endangered Species Act of 1973".

#### REPEALER

SEC. 15. The Endangered Species Conservation Act of 1969 (sections 1 through 3 of the Act of October 15, 1966, and sections 1 through 6 of the Act of December 5, 1969; 16 U.S.C. 668aa-668cc-6) is repealed.

#### APPLICABILITY WITHIN STATES

SEC. 16. (a) **STATE PLAN.**—By the end of the first year after the date of enactment of this Act, a State may establish a plan for endangered and threatened species in accordance with this Act. A plan is in accordance with this Act if it meets or exceeds the requirements set forth in section 6(c) of this Act and represents an effective response to the Nation's need to conserve, protect, restore, and propagate endangered and threatened species of fish or wildlife. Upon the establishment of such a plan, the Governor



or the head of the State agency shall promptly transmit a certified copy to the Secretary.

(b) **DETERMINATION BY SECRETARY.**—Within ninety days after the Secretary receives a certified copy of a State plan established under subsection (a) or subsection (d) of this section, the Secretary shall make a determination whether such State has established a plan for endangered and threatened species in accordance with this Act. Unless the Secretary determines, pursuant to this section, that a State plan is not in accordance with this Act, the plan shall go into effect in such State on the date designated in the plan. In no event shall such State plan go into effect less than three months or more than nine months after the date of its establishment.

(c) **PERIODIC REVIEW.**—The Secretary shall periodically, but not less than once every three years, review each State plan for endangered and threatened species which has been approved under subsection (b) of this section and for which there is experience, to determine whether such plan is still in accordance with this Act and to evaluate the success of such plan in terms of the policy of this Act. To facilitate such review, the Governor or the head of the State agency in each such State shall submit to the Secretary periodically all information relevant and requested by the Secretary. The Secretary shall report to the President and Congress simultaneously each year on the results of such reviews, including any recommendations for legislation.

(d) **NO STATE PLAN.**—Except as to species listed in Appendix I of the Convention, the provisions of this Act regarding the management and taking of any State's resident species shall become applicable in their entirety within a State fifteen months after the date of enactment of this Act unless, prior to such date, the Secretary has made a determination under subsection (b) of this section that such State has established a plan for endangered and threatened species in accordance with this Act: *Provided*, That if, within fifteen months of the date of enactment of this Act, the Secretary finds that a State which does not prevent the taking of a species listed by him as endangered does not provide adequate protection for that species, he may by regulation implement the provisions of subsection 10(a) of this Act with respect to that species in that State. If, at any time thereafter, the Secretary upon petition makes a determination, pursuant to subsection (b) of this section, that a State has established a plan for endangered and threatened species in accordance with this Act, such plan shall go into effect and the provisions of this Act regarding the conservation and management of any species shall cease to be applicable or in effect within such State on a date to be designated by the Secretary. If, after a State plan in accordance with this Act is in effect within a State, the Secretary makes a determination, pursuant to subsection (c) of this section, that such plan is no longer in accordance with this Act, the provisions of this Act regarding the management and taking of any species shall go into effect within such State and such plan shall cease to be in effect on a date to be designated by the Secretary.

(e) **PROCEDURE.**—(1) Before making any determination under this section, the Secretary shall publish a notice in the Federal Register and afford the State and all interested parties a reasonable opportunity to present their views by oral and written submission.

(2) The Secretary shall notify in writing the Governor of the affected State of any determinations made under this section and shall publish these determinations with reasons therefor in the Federal Register.

(3) Any determinations made by the Secretary under this section shall be subject

to judicial review in accordance with chapter V of title 5, United States Code, in the United States court of appeals for the circuit in which is located the State whose plan is the subject of such determination or in the United States Court of Appeals for the District of Columbia Circuit. Any such review shall be instituted within sixty days from the date on which the determination made by the Secretary is published in the Federal Register.

(f) **EFFECTIVE DATE.**—Except as otherwise provided in this section, the provisions of this Act shall become effective in their entirety upon the date of enactment of this Act.

#### MARINE MAMMALS ACT

**SEC. 17. CONFLICTS.**—Except as otherwise provided in this Act, no provision of this Act shall take precedence over any more restrictive conflicting provision of the Marine Mammal Protection Act of 1972.

#### AUTHORIZATION FOR APPROPRIATIONS

**SEC. 18.** For purposes of this Act, other than section 6 and section 13 of this Act, there are authorized to be appropriated such sums as are necessary, not to exceed \$3,960,000 for the fiscal year ending June 30, 1974; not to exceed \$6,660,000 for the fiscal year ending June 30, 1975; and not to exceed \$8,870,000 for the fiscal year ending June 30, 1976.

**SEC. 19.** (a) That, in accordance with section 3(b) of the Wilderness Act (78 Stat. 892; 16 U.S.C. 1132(b)), those lands in the Daniel Boone National Forest, Kentucky, comprising the Pioneer Weapons Hunting Area and consisting of approximately seven thousand three hundred acres, are hereby designated as wilderness.

(b) As soon as practicable after this Act takes effect, a map of the wilderness area and a description of its boundaries shall be filed with the Interior and Insular Affairs Committee of the United States Senate and House of Representatives and such map and description shall have the same force and effect as if included in this Act: *Provided, however*, That correction of clerical and typographical errors in such legal description and map may be made. A copy of such map and description shall be on file and available for public inspection in the offices of the Chief, Forest Service, United States Department of Agriculture.

(c) The wilderness area designated by this Act shall be known as the Cave Run Wilderness and shall be administered by the Secretary of Agriculture in accordance with the provisions of the Wilderness Act governing areas designated by that Act as wilderness areas, except that any reference in such provisions to the effective date of the Wilderness Act shall be deemed to be a reference to the effective date of this Act.

(d) Nothing in this Act or the Wilderness Act shall be construed as precluding the construction of a Zippo recreation site access road generally on a route extending northward from Forest Development Road Numbered 129 generally skirting the eastern boundary of the Pioneer Weapons Hunting Area, or as affecting or modifying in any manner the 1962 Cooperative Management Plan between the Department of Fish and Wildlife Resources of the State of Kentucky and the Department of Agriculture involving the designation of the Pioneer Weapons Hunting Area within the Daniel Boone National Forest.

The title was amended, so as to read: "A bill to provide for the conservation, protection, restoration, and propagation of threatened and endangered species of fish, wildlife, and plants, and for other purposes."

Mr. TUNNEY. Mr. President, I move that the Senate reconsider the vote by which the bill was passed.

Mr. PASTORE. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. TUNNEY. Mr. President, I ask unanimous consent that the Secretary of the Senate be authorized to make technical and clerical corrections in the bill, S. 1983, which was just passed.

The PRESIDING OFFICER. Without objection, it is so ordered.